

US EPA ARCHIVE DOCUMENT

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LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OPERATING PERMIT

FOR A HAZARDOUS WASTE MANAGEMENT FACILITY

Name of Permittee: U.S. Army, Fort Polk

Facility Identification

Site Owner: U.S. Forest Service

Number: LA0214022725

Permit Number:

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA) as amended (42 USC 6901 et seq.) and regulations promulgated thereunder by the U.S. Environmental Protection Agency (EPA) (codified and to be codified in Title 40 of the Code of Federal Regulations), a Permit is issued to U.S. Army, Fort Polk (hereafter called the Permittee), to operate a hazardous waste treatment facility located in Fort Polk, La., on Whiskey Chitto Road, at latitude 31° 01' 47" N and longitude 93° 04' 50" W, summarily described as follows:

The hazardous waste management unit authorized by this Permit is the open burning/open detonation unit (hereafter called the OB/OD unit) that is used to treat hazardous wastes that are reactive (D003) under regulations of the EPA. The OB/OD unit is a 13.5-acre unit located off of Whiskey Chitto Road in the south-central portion of the installation. Reactive wastes are limited to those generated at this facility (including Peason Ridge) and that are transported to the installation from off-site local, state, and federal authorities. This Permit requires that the Permittee conduct site monitoring, to consist of a system to monitor ground water beneath the unit. This Permit also requires the

Permittee to undertake a schedule of improvements to upgrade the open burning component of the OB/OD unit. The Permittee has submitted a plan that would call for a clean closure of the unit at the end of its useful life. This Permit also requires preparation and submittal of a contingent post-closure care plan that would be implemented in the event the Permittee cannot or chooses not to clean close the unit at the end of its useful life.

For the purposes of this permit, the "administrative authority" shall be the Secretary of the Louisiana Department of Environmental Quality, or his/her designee, or, in the case of Sections VII.B.6 and VII.E.2 for which the State is not authorized, the United States Environmental Protection Agency shall be the administrative authority. Upon authorization by the USEPA to administer this section (VII.B.6 and VII.E.2), the LDEQ will become the administrative authority.

The Permittee must comply with all terms and conditions of this Permit. This Permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in 40 CFR Parts 260 through 266, 270, and 124, as specified in the Permit. Applicable regulations are those which are in effect on the date of issuance of the Permit, in accordance with 40 CFR 270.32(c).

This Permit is based on the assumption that the information submitted in the Part B Permit Application attached to the Permittee's letter dated March 18, 1993, as modified by subsequent amendment dated November 16, 1993 (hereafter referred to as the Application), is accurate and that the facility will be operated as specified in the Application, and any approved revisions thereto.

Any inaccuracies found in the submitted information may be grounds for the termination, revocation and reissuance, or modification of this Permit in accordance with 40 CFR 270.41, 270.42, and 270.43 and for enforcement action. The Permittee must inform LDEQ and EPA of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This Permit is effective as of _____, 1995 and shall remain in effect until _____, 2005 unless revoked and reissued under 40 CFR 270.41, terminated under 40 CFR 270.43, or continued in accordance with 270.51(a).

William A. Kucharski, Secretary
Department of Environmental Quality

Date

Allyn M. Davis, Director
U.S. EPA Region VI

Date

MODULE I - GENERAL PERMIT CONDITIONS

I.A. EFFECT OF PERMIT

The Permittee is allowed to treat hazardous waste at the OB/OD unit in accordance with the conditions of this Permit. Any treatment of hazardous waste not authorized in this Permit is prohibited, except for treatment of hazardous waste which occurs in RCRA permit-exempt units. Subject to 40 CFR 270.4, compliance with this Permit generally constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, any infringement of state or local law or regulations, or preclude compliance with any other Federal, State, and/or local laws and/or regulations governing the treatment and handling of explosives. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3008(a), 3008(h), 3013, or 7003 of RCRA, except as provided in 40 CFR 270.4(a); Sections 106(a), 104 or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA), or any other law providing for protection of public health or the environment. [40 CFR 270.4, 270.30(g)]

I.B. PERMIT ACTIONS

I.B.1. Permit Modification, Revocation and Reissuance, and Termination

This Permit may be modified, revoked and reissued, or terminated for cause, as specified in 40 CFR 270.41, 270.42, and

270.43. The filing of a request for a Permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any Permit Condition. [40 CFR 270.4(a) and 270.30(f)]

I.B.2. Permit Renewal

This Permit may be renewed as specified in 40 CFR 270.30(b) and Permit Condition I.E.2. Review of any application for a Permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations. [40 CFR 270.30(b)]

I.C. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. [40 CFR 124.16(a)]

I.D. DEFINITIONS

For purposes of this Permit, terms used herein shall have the same meaning as those in 40 CFR Parts 124, 260, 264, 266, 268, and 270, unless this Permit specifically provides otherwise; where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term. "Regional Administrator" means the Regional Administrator of EPA Region 6, or his/her designee or authorized representative.

I.E. DUTIES AND REQUIREMENTS

I.E.1. Duty to Comply

The Permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency Permit. Any Permit noncompliance, other than noncompliance authorized by an emergency Permit, constitutes a violation of RCRA and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a Permit renewal application. [40 CFR 270.30(a)]

I.E.2. Duty to Reapply

If the Permittee wishes to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new Permit at least 180 days prior to Permit expiration. [40 CFR 270.10(h), 270.30(b)]

I.E.3. Permit Expiration

Pursuant to 40 CFR 270.50, this Permit shall be effective for a fixed term not to exceed ten years. As long as EPA is the Permit-issuing authority, this Permit and all conditions herein will remain in effect beyond the Permit's expiration date, if the Permittee has submitted a timely, complete application (see 40 CFR 270.10, 270.13 through 270.29) and, through no fault of the Permittee, the Regional Administrator has not issued a new Permit, as set forth in 40 CFR 270.51.

I.E.4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee, in an enforcement action, that it would have been necessary to halt or reduce the Permitted activity in order to maintain compliance with the conditions of this Permit. [40 CFR 270.30(c)]

I.E.5. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such measures, as are reasonable, to prevent significant adverse impacts on human health or the environment. [40 CFR 270.30(d)]

I.E.6. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit. [40 CFR 270.30(e)]

I.E.7. Duty to Provide Information

The Permittee shall furnish to the Regional Administrator, within a reasonable time, any relevant information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this Permit. [40 CFR 264.74(a), 270.30(h)]

I.E.8. Inspection and Entry

Pursuant to 40 CFR 270.30(i), the Permittee shall allow the Regional Administrator, or an authorized representative, upon the presentation of credentials and other documents, as may be required by law, to:

- I.E.8.a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;
- I.E.8.b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- I.E.8.c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- I.E.8.d. Sample or monitor, at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

I.E.9. Monitoring and Records

The Regional Administrator may require such testing by the Permittee and may make such modifications to this permit deemed necessary to ensure implementation of new regulations or requirements, or to ensure protection of human health and the environment.

- I.E.9.a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from

Appendix I of 40 CFR Part 261 or an equivalent method approved by the Regional Administrator. Laboratory methods must be those specified in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Standard Methods of Wastewater Analysis*, or an equivalent method, as specified in the Waste Analysis Plan (See Permit Condition II.C.). [40 CFR 270.30(j)(1)]

- I.E.9.b. The Permittee shall retain records of all monitoring information, including, as applicable, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, the certification required by 40 CFR 264.73(b)(9), and records of all data used to complete the application for this Permit for a period of at least 3 years from the date of the sample, measurement, report, record, certification, or application. These periods may be extended by request of the Regional Administrator at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility. [40 CFR 264.74(b) and 270.30(j)(2)] These requirements will also be applicable to open burning/open detonation units if

ground-water monitoring is required.

I.E.9.c. Pursuant to 40 CFR 270.30(j)(3), records of monitoring information shall specify:

- i. The dates, exact place, and times of sampling or measurements;
- ii. The individuals who performed the sampling or measurements;
- iii. The dates analyses were performed;
- iv. The individuals who performed the analyses;
- v. The analytical techniques or methods used; and
- vi. The results of such analyses.

I.E.10. Reporting Planned Changes

The Permittee shall give notice to the Regional Administrator, as soon as possible, of any planned physical alterations or additions to the Permitted facility. [40 CFR 270.30(1)(1)]

I.E.11. Reporting Anticipated Noncompliance

The Permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with Permit requirements. [40 CFR 270.30(1)(2)]

I.E.12. Transfer of Permits

This Permit is not transferable to any person, except after notice to the Regional Administrator. The Regional Administrator may require modification or revocation and reissuance of the Permit pursuant to 40 CFR 270.40. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270 and this Permit. [40 CFR 270.30(1)(3), 264.12(c)]

I.E.13. Twenty-Four Hour Reporting

I.E.13.a. The Permittee shall report to the Regional Administrator any noncompliance which may endanger health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances. The report shall include the following:

- i. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.
- ii. Any information of a release or discharge of hazardous waste, or of a fire or explosion from the hazardous waste management facility which could threaten the environment or human health outside the facility.

- I.E.13.b. The description of the occurrence and its cause shall include:
- i. Name, address, and telephone number of the owner or operator;
 - ii. Name, address, and telephone number of the facility;
 - iii. Date, time, and type of incident;
 - iv. Name and quantity of materials involved;
 - v. The extent of injuries, if any;
 - vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
 - vii. Estimated quantity and disposition of recovered material that resulted from the incident.
- I.E.13.c. A written submission shall also be provided within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected;

and, if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Regional Administrator may waive the five-day written notice requirement in favor of a written report within 15 days. [40 CFR 270.30(1)(6)]

I.E.14. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, Permit Conditions I.E.11.-14., at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Condition I.E.13. [40 CFR 270.30(1)(10)]

I.E.15. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the Permit application, or submitted incorrect information in a Permit application or in any report to the Regional Administrator, the Permittee shall promptly submit such facts or information. [40 CFR 270.30(1)(11)]

I.F. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to or requested by the Regional Administrator, his/her designee, or authorized representative, shall be signed and certified in accordance with 40 CFR 270.11 and 270.30(k).

I.G. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE REGIONAL ADMINISTRATOR

All reports, notifications, or other submissions which are required by this Permit to be sent or given to the Regional Administrator should be sent by certified mail or given to:

Jane Saginaw, Regional Administrator
 USEPA Region 6
 1445 Ross Ave.
 Dallas, Texas 75202
 (214) 665-2100

I.H. CONFIDENTIAL INFORMATION

In accordance with 40 CFR 270.12, the Permittee may claim confidential any information required to be submitted by this Permit.

I.I. DOCUMENTS TO BE SUBMITTED AFTER PERMIT ISSUANCE

The Permittee shall submit the following document to the Regional Administrator by the date shown:

<u>Date</u>	<u>Document</u>	<u>Due</u>
	Contingent Post-Closure Care Plan days after pursuant to 40 CFR 264.603 and effective date Permit Module V. of Permit	90

I.J. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the facility, until closure is completed and certified by an independent, registered professional engineer, the following documents and all amendments, revisions and modifications to these documents:

1. Waste Analysis Plan, as required by 40 CFR 264.13 and this Permit.

2. Inspection schedules, as required by 40 CFR 264.15(b)(2) and this Permit.
3. Personnel training documents and records, as required by 40 CFR 264.16(d) and this Permit.
4. Contingency Plan, as required by 40 CFR 264.53(a) and this Permit.
5. Operating record, as required by 40 CFR 264.73 and this Permit.
6. Closure Plan, as required by 40 CFR 264.112(a) and this Permit.
7. Contingent Post-Closure Plan, as required by 40 CFR 264.118 (a), Permit Condition I.I.1, and Permit Module V.
8. All other documents required by Permit Modules I-VI.

MODULE II - GENERAL FACILITY CONDITIONS

II.A. DESIGN AND OPERATION OF FACILITY

The Permittee shall construct, maintain, and operate the facility to minimize the possibility of an unplanned fire, explosion, or any unplanned, sudden or nonsudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment, as required by 40 CFR 264.31.

II.B. REQUIRED NOTICES

II.B.1. Hazardous Waste from Off-Site Sources

When the Permittee is to receive hazardous waste from an off-site source (except where the Permittee is also the generator), it must inform the generator in writing that it has the appropriate Permits, and will accept the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the operating record. [40 CFR 264.12(b)]

II.C. GENERAL WASTE ANALYSIS

The Permittee shall follow the waste analysis procedures required by 40 CFR 264.13, as described in the Waste Analysis Plan, Section I.B. of the Permit application. Before the Permittee treats any reactive waste at the OB/OD unit having identifiable markings or other means of identification, it must review manufacturers or Department of Defense data or information which must be known to treat the waste safely and in accordance with this Permit. If waste or environmental media are subjected to analytical testing, the Permittee shall maintain

proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations.

If the Permittee uses a contract laboratory to perform analyses, then the Permittee shall inform the laboratory in writing that it must operate under the waste analysis conditions set forth in this Permit.

II.D. SECURITY

The Permittee shall comply with the security provisions of 40 CFR 264.14(b) and Section I.C1. of the Permit application.

II.E. GENERAL INSPECTION REQUIREMENTS

The Permittee shall follow the inspection schedule set out in Section I.C2. of the Permit application. The Permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by 40 CFR 264.15(c). Records of inspection shall be kept, as required by 40 CFR 264.15(d).

II.F. PERSONNEL TRAINING

The Permittee shall conduct personnel training, as required by 40 CFR 264.16. This training program shall follow the procedures set out in Section I.E. of the Permit application. The Permittee shall maintain training documents and records, as required by 40 CFR 264.16(d) and (e).

II.G. SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee shall comply with the requirements of 40 CFR 264.17(a). The Permittee shall follow the

procedures for handling ignitable, reactive, and incompatible wastes set forth in Section I.C5. of the Permit application.

II.H. PREPAREDNESS AND PREVENTION

II.H.1. Required Equipment

At a minimum, the Permittee shall maintain at the facility the equipment set forth in the Contingency Plan, Section I.D. of the Permit application, as required by 40 CFR 264.32.

II.H.2. Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in Appendix I.D.-1 of the Permit application, as necessary, to assure its proper operation in time of emergency, as required by 40 CFR 264.33.

II.H.3. Access to Communications or Alarm System

The Permittee shall maintain access to the communications or alarm system, as required by 40 CFR 264.34.

II.H.4. Arrangements with Local Authorities

The Permittee shall attempt to make arrangements with state and local authorities, as required by 40 CFR 264.37. If state or local officials decline to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

II.I. CONTINGENCY PLAN

II.I.1. Implementation of Plan

The Permittee shall immediately carry out the provisions of the Contingency Plan, Section I.D. of the Permit application, whenever there is an unplanned fire, explosion, or release of hazardous waste or constituents which could threaten human health or the environment.

II.I.2. Copies of Plan

The Permittee shall maintain a copy of the Contingency Plan at the facility and shall provide a copy to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be asked to provide emergency assistance, as required by 40 CFR 264.53.

II.I.3. Amendments to Plan

The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by 40 CFR 264.54.

II.I.4. Emergency Coordinator

A trained emergency coordinator shall be available at all times in case of an emergency, as required by 40 CFR 264.55.

The names, addresses, and phone numbers of all persons qualified to act as emergency coordinators must be kept up to date and included in the Contingency Plan. [40 CFR 264.52(d)]

II.J. DOCUMENTATION OF SHIPMENTS FROM OFF-SITE SOURCES

The Permittee shall utilize Incident Form 3265 to document and track shipments of reactive wastes from off-site sources to the installation.

II.K. RECORDKEEPING AND REPORTING

In addition to the recordkeeping and reporting requirements specified elsewhere in this Permit, the Permittee shall do the following:

II.K.1. Operating Record

The Permittee shall maintain a written operating record at the facility, in accordance with 40 CFR 264.73.

II.K.2. Biennial Report

The Permittee shall comply with the biennial reporting requirements of 40 CFR 264.75.

II.L. GENERAL CLOSURE REQUIREMENTS

II.L.1. Performance Standard

The Permittee shall close the facility, as required by 40 CFR 264.111 and in accordance with the Closure Plan, Section I.F. of the Permit application.

II.L.2. Amendment to Closure Plan

The Permittee shall amend the Closure Plan, in accordance with 40 CFR 264.112(c), whenever necessary.

II.L.3. Notification of Closure

The Permittee shall notify the Regional Administrator in writing at least 60 days prior to the date on which he expects to begin closure of the OB/OD unit or final closure of the facility, as required by 40 CFR 264.112(d).

II.L.4. Time Allowed For Closure

After receiving the final volume of hazardous waste at the OB/OD unit, the Permittee shall treat, remove from the unit or facility, or dispose of on site all hazardous waste and shall complete closure activities, in accordance with 40 CFR 264.113 and the schedules specified in the Closure Plan, Section I.F. of the Permit application.

II.L.5. Disposal or Decontamination of Equipment, Structures, and Soils

The Permittee shall decontaminate and/or dispose of all contaminated equipment, structures, and soils, as required by 40 CFR 264.114 and the Closure Plan, Section I.F. of the Permit application.

II.L.6. Certification of Closure

The Permittee shall certify that the facility has been closed in accordance with the specifications in the Closure Plan, as required by 40 CFR 264.115.

II.M. GENERAL CONTINGENT POST-CLOSURE REQUIREMENTS

II.M.1. Post-Closure Care Period

The Permittee shall begin post-closure care, if required, for the OB/OD unit after completion of closure of the unit and continue for 30 years after that date, or for a shorter or longer period pursuant to 40 CFR 264.117(a)(2). Post-closure care shall be in accordance with 40 CFR 264.117 and the Contingent Post-Closure Plan required by Permit Condition I.I.1. and Permit Module V.

II.M.2. Post-Closure Security

The Permittee shall maintain security at the facility during the post-closure care period, in accordance with the Contingent Post-Closure Plan, and 40 CFR 264.117(b).

II.M.3. Amendment to Contingent Post-Closure Plan

The Permittee shall amend the Contingent Post-Closure Plan in accordance with 40 CFR 264.118(d), whenever necessary.

II.M.4. Post-Closure Notices

II.M.4.a. No later than 60 days after certification of closure of the OB/OD unit, the Permittee shall submit a record to the Regional Administrator of the types and estimated quantity of hazardous waste treated at the OB/OD unit over its operating life, to the best of its knowledge.

II.M.4.b. No later than submission of the certification of closure of the OB/OD unit, the Permittee shall submit to the Regional Administrator and the DPW Real

Estate Division of the Permittee a survey plat indicating the location and dimensions of the closed unit with respect to permanently surveyed benchmarks. This plat must be prepared and certified by a professional land surveyor. The plat must contain a note, prominently displayed, which states the Permittee's obligation to restrict disturbance of the closed unit in accordance with applicable Subpart G regulations.

II.M.4.c. The Permittee shall request and obtain a Permit modification prior to post-closure removal of hazardous wastes, hazardous waste residues, liners, or contaminated soils, in accordance with 40 CFR 264.119(c).

II.M.5. Certification of Completion of Post-Closure Care

The Permittee shall certify that the post-closure care period was performed in accordance with the specifications in the Contingent Post-Closure Plan, as required by 40 CFR 264.120.

II.N. COST ESTIMATE AND FINANCIAL ASSURANCE FOR FACILITY CLOSURE AND CONTINGENT POST-CLOSURE

In accordance with 40 CFR 264.140, the federal government is exempt from the financial assurance requirements of 40 CFR Part 264, Subpart H. Consequently, cost estimates and a financial

assurance mechanism for closure and contingent post-closure care of the OB/OD unit are not required.

II.0. LIABILITY REQUIREMENTS

In accordance with 40 CFR 264.140(c), the federal government is exempt from maintaining liability coverage for sudden and nonsudden accidental occurrences.

MODULE III - TREATMENT OF REACTIVE WASTES

III.A. MODULE HIGHLIGHTS

Open burning and open detonation of waste ordnance materials occurs at the OB/OD unit. The OB/OD unit consists of four components: burn/detonation area; unloading area; firing point bunker; and buffer zone.

The unit is a cleared strip of land (5.16 acres) with approximate dimensions of 100 to 200 feet in width and 1,500 feet in length and includes a 100-foot buffer zone around the cleared area, for a total unit acreage of 13.5 acres. The area was constructed in 1951.

III.B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

III.B.1. The Permittee may open burn/open detonate at the OB/OD unit hazardous wastes (also referenced in this Permit as "reactive waste") that consist of common military ordnance material (such as black powder, white/red phosphorus, tear gas, ammunitions, propellants, and explosive materials).

III.B.2. The Permittee is prohibited from treating hazardous waste at the OB/OD unit that is not identified in Permit Condition III.B.1.

III.C. DESIGN, CONSTRUCTION, AND OPERATING REQUIREMENTS

III.C.1. Open Burning in a Containment Device

Open burning at the OB/OD unit shall be conducted pursuant to interim status requirements in 40 CFR Part 265, Subpart P, and Permit Condition III.C.1.a. below, pending completion and commencement of use of the scheduled improvements identified in Permit Condition III.K. The Permittee shall ensure that the scheduled improvements for open burning at the OB/OD unit, to be submitted for review and approval through an application for Permit modification, address the following requirements:

- III.C.1.a. The Permittee shall operate and maintain the open burning device in accordance with standard operating procedures in Section II.A1. of the Permit application and, for the open burning improvements, the application for Permit modification, that specify how the wastes are to be treated.
- III.C.1.b. The Permittee shall design, construct, operate, and maintain a precipitation cover for the open burning tray(s).
- III.C.1.c. The Permittee shall design, construct, operate, and maintain the open burning unit to minimize air emissions or exposure of people (onsite or offsite) to toxic or hazardous emissions in accordance with Section I.C4. of the Permit application.

III.C.1.d. The Permittee shall provide guidance on how ash/residues from the open burning unit will be managed.

III.C.2. Open Detonation On/In The Ground

III.C.2.a. The Permittee shall operate and maintain the open detonation area at the OB/OD unit in accordance with the operating procedures contained in Sections I.C4., I.C4b., I.C5., and II.A2. of the Permit application.

III.C.2.b. The Permittee shall operate and maintain the open detonation area to minimize air emissions or exposure of people (onsite or offsite) to toxic or hazardous emissions in accordance with the hazard prevention procedures in Section I.C4. of the Permit application.

III.C.2.c. The Permittee shall manage residues from open detonation in accordance with Section II.A2. of the Permit application.

III.D. HANDLING REQUIREMENTS

The Permittee shall handle/manage reactive waste that will be treated at the OB/OD unit in accordance with Section II.A. of the Permit application.

III.E. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect the OB/OD unit in accordance with the inspection schedule set out in Section I.C2. of the Permit application.

III.F. PREVENTION OF UNINTENDED IGNITION OR REACTION OF WASTES

The Permittee shall follow the procedures, contained in Section I.C5 of the Permit application, designed to prevent unintended ignition or reaction of waste.

III.G. MONITORING REQUIREMENTS

The Permittee shall conduct ground-water monitoring at the OB/OD unit in accordance with Permit Module IV.

III.H. FACILITY MODIFICATION/EXPANSION

III.H.1. Permit Modification

EPA reserves the right to modify this Permit in accordance with 40 CFR 270.41.

III.H.2. Permit Modification At The Request Of The Permittee

Modifications or expansions of the facility shall be accomplished in accordance with 40 CFR 270.42.

III.I. CLOSURE AND CONTINGENT POST-CLOSURE

III.I.1. At final closure of the OB/OD unit, the Permittee shall follow the procedures in the Closure Plan, Section I.F. of the Permit application.

III.I.2. If, after closure, the Permittee finds that not all contaminated soils and

debris can be removed or decontaminated in accordance with the Closure Plan, then the Permittee shall close the OB/OD unit and perform post-closure care in accordance with requirements contained in Module V of this Permit.

III.J RECORDKEEPING

The Permittee shall develop and maintain all records required to comply with 40 CFR 264.73 and 40 CFR 264.602.

III.K. SCHEDULE FOR IMPROVEMENTS

The Permittee shall implement improvements to the OB/OD unit for open burning according to the following milestones below. Pending completion and commencement of use of the improvements, the Permittee shall conduct open burning under interim status and in accordance with Permit Condition III.C.1.a.

<u>Calendar Time/Facility FY</u>	<u>Activity</u>
May 10, 1994	Permittee identified improvements on 1383 Report and requested funds in FY 1994 budget
4th Qtr. 94/FY 95	Permittee anticipates receipt of obligation of funds
4th Qtr 94/FY 95	Permittee negotiates and awards contract for development of plans and specifications

<u>Calendar</u> <u>Time/Facility</u> <u>FY</u>	<u>Activity</u>
2nd Qtr 95/FY 95	Completion of plans and specifications; submittal to Regional Administrator for review and approval through an application for Permit modification
3rd Qtr 95/FY 95	Regional Administrator anticipated to complete review and approval of plans and specifications
3rd Qtr 95/FY 95	Regional Administrator anticipated to issue approval to commence construction through a Permit modification
4th Qtr 95/FY 96	Permittee submittal of approved plans and specifications to Corps of Engineers for solicitations
2nd Qtr 96/FY 96	Contract award and completion of construction
3rd Qtr 96/FY 96	Permittee submittal to Regional Administrator, by certified mail or hand delivery, of certification of completion of construction in accordance with approved plans and specifications

The Permittee shall commence use of the permitted open burn component of the OB/OD unit if, within 30 days of submission of certification of construction, the Regional Administrator has not inspected the unit component; otherwise, the Permittee shall commence use of the permitted unit component at an

earlier time upon Regional Administration inspection and approval.

The Permittee and Regional Administrator recognize that the federal funding and contracting process, the Regional Administrator's review and approval process, and/or a force majeure event may result in an implementation schedule that is different than that specified above. A force majeure is defined as any event arising from causes not reasonably foreseeable and beyond the control of Permittee, which could not be overcome by due diligence. The Regional Administrator and the Permittee shall work to address and resolve any differences that may arise during the implementation phase. Notwithstanding the schedule above, the Permittee shall have the right to make any required submittals at a time earlier than that specified above.

MODULE IV - GROUND-WATER MONITORING

IV.A. MODULE HIGHLIGHTS

Open burning and open detonation of waste ordnance materials occurs at the OB/OD unit. The OB/OD unit consists of four components: burn/detonation area; unloading area; firing point bunker; and buffer zone.

The unit is a cleared strip of land (5.16 acres) with approximate dimensions of 100 to 200 feet in width and 1,500 feet in length and includes a 100-foot buffer zone around the cleared area, for a total unit acreage of 13.5 acres. The area was constructed in 1951.

The reactive wastes treated at the OB/OD unit consist of common military ordnance material (such as black powder, white/red phosphorus, tear gas, ammunitions, propellants, and explosive materials).

After considering the Permittee's Subpart X application for the OB/OD unit, the Regional Administrator has determined that the site monitoring program shall consist of ground-water monitoring to ensure that any release of hazardous waste or hazardous constituents from open burning/open detonation of reactive wastes to the shallow unconfined aquifer beneath the OB/OD unit are detected and, as appropriate, addressed through corrective action. The elements of the site monitoring program to be established by the Permittee are derived from 40 CFR Part 264, Subpart F, but have been tailored as detailed herein to the site- and unit-specific risks and circumstances posed by this Subpart X unit. Therefore, any references herein to particular 40 CFR Part 264, Subpart F, requirements do not imply that the full Subpart F standards are applicable.

- IV.A.1. During the first year after Permit issuance, the Permittee shall conduct quarterly sampling within the first 30 days of each calendar quarter of existing ground-water wells W-1, W-2, W-3, and W-4 to determine the presence and/or concentration of the following parameters: bis(2-ethylhexyl)phthalate (Method 8270), the explosive constituent cyclotrimethylene trinitramine (RDX) (Method 8330), mercury (Method 7470), and lead (Method 7421). Within 30 days after receiving the results from each sampling event, the Permittee shall submit a report summarizing the results to the Regional Administrator. The report shall include the dates the samples were taken and a table which presents the analytical data.
- IV.A.2. The "first year after Permit issuance" is defined as the first four full quarters after Permit issuance.
- IV.A.3. Within 45 days of receiving the results of the fourth quarter sampling event referenced in Permit Condition IV.A.1. above, the Permittee shall submit an application for Permit modification to the Regional Administrator for the design, construction, and maintenance of a site monitoring program for the shallow unconfined aquifer beneath the OB/OD unit. The application for Permit modification shall include:
- IV.A.3.a. The design of a well system (which may include, in whole or in part, existing wells W-1, W-2, W-3, and W-4) which will yield ground-water samples from the shallow unconfined

aquifer which represent the quality of upgradient water and water passing the downgradient boundaries of the OB/OD unit. Well locations and well construction details (for existing and any proposed wells) shall be specified in the design report. For proposed wells, the design report shall also include a schedule for installation (not to exceed 90 days from the effective date of the Regional Administrator's approval of the Permit modification request) and a schedule for submittal of certification of proper installation (not to exceed 120 days from the effective date of the Regional Administrator's approval of the Permit modification request).

- IV.A.3.b. A sampling and analysis plan consisting of procedures and techniques for:
- i. Sample collection;
 - ii. Sample preservation and shipment;
 - iii. Analytical procedures; and
 - iv. Chain-of-custody control.

The plan shall also include a list of proposed parameters or constituents to be monitored. The list shall solely consist of the parameters identified in Permit

Conditions IV.A.1. and IV.C. of this section, with the exception that if bis(2-ethylhexyl)phthalate is not detected during the verification sampling rounds or its presence can be attributed to non-OB/OD activities, it may be deleted from the proposed analyte list for the site monitoring program.

The plan shall also include the frequency for collecting samples, except that the frequency shall not be less than semiannual sampling of the site monitoring system, to be initiated commencing with the effective date of the Regional Administrator's approval of the Permit modification request or the date of certification of any new wells that are installed, whichever is later.

IV.A.3.c. Criteria for establishing whether a release that may have adverse effects on human health and the environment has occurred from the OB/OD unit to ground water at the point of compliance wells. The Permittee shall propose one or the other or a combination of the following methods, at the election of the Permittee, for determining the existence of a release:

- i. Comparison of measured ground-water concentrations to concentration limits that will not pose a significant present or potential risk to

human health or the environment as long as the limits are not exceeded (risk-based concentration limits). The application for Permit modification shall include, as applicable, the proposed risk-based concentration limits and a detailed rationale and justification for development of these limits.

- ii. Statistical evaluation of the ground-water data in accordance with Permit Condition IV.F., including comparison of collected data to data representative of background concentrations of metals and, as applicable, explosives concentrations in ground-water samples upgradient of the OB/OD unit. The application for Permit modification shall include, as applicable, any proposed background concentrations and a detailed rationale and justification for establishment of these limits and the statistical method(s) to be used by the Permittee.

- IV.A.3.d. Procedures for notification to the Regional Administrator in accordance with Permit Conditions IV.H.4.a. and b. of an exceedance of a risk-based concentration limit and/or statistically significant

evidence of a release and for immediate resampling of the well(s) that exhibited the exceedance for the particular constituent(s).

- IV.A.3.e. If the release is confirmed, procedures in accordance with Permit Conditions IV.H.4.d. or e. and/or IV.H.5.a.-d., for submittal of an application for Permit modification.
- IV.A.3.f. Procedures for conducting a trend analysis on the ground-water data. At minimum, the Permittee shall propose to construct and maintain a graph for each well that depicts the variation in concentrations with respect to time and to update these graphs after receiving the results of each sampling event. The Permittee shall determine for each well whether any of the parameters have exhibited what appears to be a significant trend toward increased concentrations. In the event a significant trend is apparent, the Permittee shall propose one or more of the following measures to address the apparent trend: resampling of the well(s) in question, notification to the Regional Administrator of the results of the resampling and whether the apparent trend is confirmed or not, and, as applicable, proposed changes in operating and/or monitoring practices to address the apparent trend.

IV.B. WELL LOCATION, INSTALLATION AND CONSTRUCTION

Upon the Regional Administrator's approval of the application for Permit modification referenced in Permit Condition IV.A.3. above, and in accordance with the schedules contained in that approval, the Permittee shall install and maintain a ground-water monitoring system as specified below:

- IV.B.1. The Permittee shall install and maintain the approved ground-water monitoring wells at the locations specified on a map to be submitted with the application for Permit modification. The map shall also provide unique identifiers for each well and shall identify point of compliance wells. The numbers and locations of the wells must be sufficient to identify and define the logical ground-water release pathways from the OB/OD unit based on the site-specific hydrogeologic characterization.
- IV.B.2. The Permittee shall, for any wells constructed after the effective date of the Permit, construct and maintain the monitoring wells identified in Permit Condition IV.B.1., in accordance with the detailed plans and specifications to be submitted in and approved through the application for Permit modification.
- IV.B.3. All wells deleted from the monitoring program shall be decommissioned in accordance with procedures to be specified in the application for Permit modification. The application shall also contain procedures for ensuring that well decommissioning methods and certification shall be submitted to the Regional

Administrator within 30 days from the date the wells are removed from the monitoring program.

IV.C. INDICATOR PARAMETER AND MONITORING CONSTITUENTS

During the first year of verification monitoring provided for in Permit Condition IV.A.1., the Permittee may make a background determination to establish levels for the explosive constituent cyclotrimethylene trinitramine (RDX), mercury, and lead for the site monitoring program. The Regional Administrator may allow determination of background quality for RDX, mercury, and lead based on samples from other wells on the installation.

IV.D. SAMPLING AND ANALYSIS PROCEDURES

The Permittee shall use the following techniques and procedures when obtaining and analyzing samples from the ground-water monitoring wells described in Permit Condition IV.B.

- IV.D.1. Samples shall be collected using the techniques described in the sampling and analysis plan referenced in Permit Condition IV.A.3.b. as approved by the Regional Administrator.
- IV.D.2. Samples shall be preserved and shipped in accordance with the procedures specified in the sampling and analysis plan referenced in Permit Condition IV.A.3.b. as approved by the Regional Administrator.
- IV.D.3. Samples shall be analyzed in accordance with the procedures specified in the sampling and analysis plan referenced in

Permit Condition IV.A.3.b. as approved by the Regional Administrator.

IV.D.4. Samples shall be tracked and controlled using the chain-of-custody procedures specified in the sampling and analysis plan referenced in Permit Condition IV.A.3.b. as approved by the Regional Administrator.

IV.E. ELEVATION OF THE GROUND-WATER SURFACE

IV.E.1. The Permittee shall determine the elevation of the ground-water surface at each well each time the ground-water is sampled.

IV.E.2. The Permittee shall record the surveyed elevation of the monitoring well(s) when installed (with as-built drawings).

IV.F. STATISTICAL PROCEDURES

IV.F.1. As applicable, when evaluating the monitoring results in accordance with Permit Condition IV.G., the Permittee shall use one of the following statistical methods:

IV.F.1.a A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

IV.F.1.b An analysis of variance (ANOVA) based on ranks followed by multiple

comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

- IV.F.1.c A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.
 - IV.F.1.d A control chart approach that gives control limits for each constituent.
 - IV.F.1.e Another statistical test method submitted by the Permittee and approved by the Regional Administrator.
- IV.F.2 Any statistical method identified in Permit Condition IV.F.1. that is selected by the Permittee shall comply with the following performance standards, as appropriate, and shall be selected with regard to the appropriateness of these tests for site conditions as outlined in Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities: Interim Final Guidance (EPA, OSW, 1989):
- IV.F.2.a The statistical method used to evaluate ground-water monitoring

data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the Permittee to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

- IV.F.2.b If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a ground-water protection standard, the test shall be done at a Type 1 error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type 1 experiment-wise error rate for each testing period shall be no less than 0.05; however, the Type 1 error of no less than 0.01 for individual well comparisons must be maintained. This performance level does not apply to tolerance intervals, prediction intervals, or control charts.
- IV.F.2.c If a control chart approach is used to evaluate ground-water monitoring data, the specific type of control chart and its associated parameter

values shall be proposed by the Permittee and approved by the Regional Administrator.

- IV.F.2.d If a tolerance interval or a prediction interval is used to evaluate ground-water monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be proposed by the Permittee and approved by the Regional Administrator. These parameters will be determined after considering the number of samples in the background database, the data distribution, and the range of the concentration values for each constituent of concern.
- IV.F.2.e The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantification limit (PQL) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.
- IV.F.2.f If necessary, the statistical method shall include procedures to control or correct for seasonal and

spatial variability as well as temporal correlation in the data.

IV.G. MONITORING PROGRAM AND DATA EVALUATION

- IV.G.1. The Permittee shall collect, preserve, and analyze samples pursuant to Permit Condition IV.D.
- IV.G.2. After approval of the application for Permit modification (Permit Condition IV.A.3.), the Permittee shall collect samples and conduct a determination semiannually as to whether there is an exceedance of a risk-based concentration limit and/or statistically significant evidence of contamination for the parameter and hazardous constituents specified in Permit Condition IV.C. The Permittee shall express the ground-water quality at each monitoring well in a form necessary for any determination of statistically significant increases (i.e., means and variances) and/or exceedance of a risk-based concentration limit.
- IV.G.3. After approval of the application for Permit modification (Permit Condition IV.A.3.), the Permittee shall determine the ground-water flow rate and direction in the uppermost aquifer at least annually. Methods for flow monitoring shall be proposed by the Permittee in the application for Permit modification (Permit Condition IV.A.3.) and approved by the Regional Administrator.
- IV.G.4. After approval of the application for Permit modification (Permit Condition IV.A.3.), the Permittee shall determine

whether there is an exceedance of a risk-based concentration limit and/or statistically significant increase over the background values for the parameter and hazardous constituents identified in Permit Condition IV.C. each time ground-water quality is determined at the compliance point. In determining whether such an increase has occurred, the Permittee must compare the ground-water quality at each monitoring well specified in Permit Condition IV.B.1. to the risk-based concentration limits established through Permit Condition IV.A.3.c.i. and/or the background value established through Permit Condition IV.A.3.c.ii., in accordance with one or more of the statistical procedures specified in Permit Condition IV.F., as applicable.

IV.H. RECORDKEEPING AND REPORTING

- IV.H.1. The Permittee shall enter all monitoring, testing, and analytical data obtained in accordance with Permit Condition IV.G. in the facility operating record. The data must include all computations and results associated with statistical tests, if used in evaluating ground-water monitoring data.
- IV.H.2. The established risk-based concentration limits and/or background values and the computations necessary to determine these limits and/or values must be submitted to the Regional Administrator.

Ground-water monitoring data collected, including actual levels of constituents, must be maintained in the facility operating record.

IV.H.3. The Permittee shall submit to the Regional Administrator the analytical results required by Permit Condition IV.G.2., the ground-water flow rate and direction results required by Permit Condition IV.G.3., and the results of the initial analyses required by Permit Condition IV.G.4. in a semiannual site monitoring report to be submitted within 60 days of receipt of analytical results from each semiannual sampling event.

IV.H.4. If the Permittee determines, pursuant to Permit Condition IV.G., that there is an exceedance of a risk-based concentration limit and/or a statistically significant increase above the background values for the parameter or hazardous constituents specified in Permit Condition IV.C., the Permittee shall:

IV.H.4.a. Notify the Regional Administrator in writing within 7 days of the determination.

IV.H.4.b. Immediately sample the ground-water in the well(s) that exhibited the increase and determine the concentration of the particular constituent(s) that have shown an exceedance of a risk-based concentration limit and/or statistically significant increase in concentration.

IV.H.4.c. As applicable, the Permittee may establish the background values for the particular constituent(s).

IV.H.4.d. If a statistically significant release is confirmed, based on an exceedance of background values, pursuant to the resampling required by Permit Condition IV.H.4.b, within 90 days of receipt of analytical results from the resampling, submit to the Regional Administrator an application for a Permit modification to establish a compliance monitoring program. The application must include the following information:

- i. An identification of the concentration of constituents found in the ground-water at each monitoring well at the compliance point.
- ii. Any proposed changes to the ground-water monitoring system at the facility necessary to meet the requirements of compliance monitoring.
- iii. Any proposed changes to the monitoring frequency, sampling and analysis procedures, or methods or statistical procedures used at the facility necessary to meet the requirements of compliance monitoring.
- iv. For each hazardous constituent found at the compliance point, a proposed alternate background

concentration limit or a notice of intent to seek an alternate concentration limit (ACL) for a hazardous constituent, or if no ACL will be sought a schedule for submittal of a corrective action feasibility plan in accordance with 40 CFR Part 264.100 to the Regional Administrator within 180 days.

- IV.H.4.e. If a release, which was identified based on an exceedance of a risk-based concentration limit, is confirmed pursuant to the resampling required by Permit Condition IV.H.4.b., within 10 days of receipt of analytical results from the resampling, the Permittee shall submit written notice to the Regional Administrator that identifies the concentration(s) of constituents in the ground water at each monitoring well at the compliance point and that contains a notice of intent to submit an application for Permit modification that contains a corrective action feasibility plan.
- i. Within 180 days of confirmation of the release identified pursuant to Permit Condition IV.H.4.e., the Permittee shall submit a corrective action feasibility plan in accordance with 40

CFR Part 264.100 to the
Regional Administrator.

IV.H.5. If the Permittee determines, pursuant to Permit Condition IV.G., there is an exceedance of a risk-based concentration limit and/or statistically significant increase above the background values for the parameter and hazardous constituents specified in Permit Condition IV.C., it may demonstrate that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. In such cases, the Permittee shall:

- IV.H.5.a. Notify the Regional Administrator in writing within 7 days of the determination made pursuant to Permit Condition IV.G. that it intends to make a demonstration.
- IV.H.5.b. Within 90 days of the notice, submit a report to the Regional Administrator which demonstrates that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation.
- IV.H.5.c. Within 90 days of the notice, submit to the Regional Administrator an application for a Permit modification to make any appropriate changes to the site monitoring program at the facility.
- IV.H.5.d. Continue to monitor in accordance with the site monitoring program at the facility.

IV.I. REQUEST FOR PERMIT MODIFICATION

If the Permittee or the Regional Administrator determines the site monitoring program no longer satisfies the requirements of the regulations, the Permittee must, within 90 days of its determination or receipt of written notice of the Regional Administrator's determination, submit an application for a Permit modification to make any appropriate changes to the program which will satisfy the requirements of 40 CFR Part 264, Subpart X.

MODULE V - CONTINGENT POST-CLOSURE CARE

V.A. UNIT IDENTIFICATION

In the event the Permittee cannot or elects not to clean close the OB/OD unit, the Permittee shall provide post-closure care for the unit, subject to the terms and conditions of this Permit.

V.B. POST-CLOSURE PROCEDURES AND USE OF PROPERTY

- V.B.1. The Permittee shall conduct post-closure care for the OB/OD unit, to begin after completion of closure of the unit and continue for 30 years after that date, except that the 30-year post-closure care period may be shortened upon application and demonstration approved by the Regional Administrator that the facility is secure, or may be extended if the Regional Administrator finds this is necessary to protect human health and the environment. [40 CFR 264.117(a)]
- V.B.2. The Permittee shall maintain and monitor the site monitoring system of Permit Module IV during the post-closure period.
- V.B.3. If the OB/OD unit cannot be clean-closed it must be closed as a landfill or as a land treatment unit, at the election of the Permittee.
- V.B.3.a. If the Permittee elects to comply with the requirements for landfills, the following are applicable, except to the extent they may be modified by the Regional Administrator for this

Subpart X unit: [40 CFR
264.310(b)]

- i. Maintain the integrity and effectiveness of the final cover, including making repairs to the cap, as necessary, to correct the effects of settling, subsidence, erosion, or other events;
- ii. Maintain and monitor the site monitoring system provided for in Module IV of this Permit;
- iii. Prevent run-on and run-off from eroding or otherwise damaging the final cover; and
- iv. Protect and maintain surveyed benchmarks used in complying with the surveying and recordkeeping requirements of 40 CFR 264.309.

V.B.3.b. If the Permittee elects to comply with the requirements for land treatment units, the post-closure criteria in 40 CFR 264.280(c)(2)-(6) and (d) and (e) are applicable, except to the extent these criteria may be modified by the Regional Administrator for this Subpart X unit.

V.B.4. The Permittee shall comply with any security requirements required by the

Regional Administrator pursuant to 40 CFR 264.117(b).

- V.B.5. The Permittee shall not allow any use of the OB/OD unit which will disturb the integrity of any final cover, any components of the containment system, or the function of the facility's monitoring system during the post-closure care period. [40 CFR 264.117(c)]
- V.B.6. The Permittee shall implement the Contingent Post-Closure Plan. All post-closure care activities must be conducted in accordance with the provisions of the Contingent Post-Closure Plan. [40 CFR 264.117(d) and 264.118(b)]

V.C. INSPECTIONS

The Permittee shall inspect the components, structures, and equipment at the closed OB/OD unit in accordance with the Inspection Schedule in the Contingent Post-Closure Plan. [40 CFR 264.117(a)(1)(ii)]

V.D. NOTICES AND CERTIFICATION

- V.D.1. No later than 60 days after certification of closure of the OB/OD unit, the Permittee shall submit to the Regional Administrator a record of the types and estimated quantity of hazardous wastes treated at the OB/OD unit. For hazardous wastes treated before January 12, 1981, the Permittee shall identify the type, location, and quantity of the hazardous wastes to the best of its knowledge and in accordance with any records it has kept. [40 CFR 264.119(a)]

- V.D.2. No later than submission of certification of closure of the OB/OD unit, the Permittee shall:
- V.D.2.a. Submit the survey plat referenced in Permit Condition II.M.4.b. to the Regional Administrator and DPW Real Estate Division of the Permittee.
- V.D.3. If the Permittee or any subsequent owner or operator of the land upon which the OB/OD unit is located, wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, then he shall request a modification to this Permit in accordance with the applicable requirements in 40 CFR Parts 124 and 270. The Permittee or any subsequent owner or operator of the land shall demonstrate that the removal of hazardous wastes will satisfy the criteria of 40 CFR 264.117(c). [40 CFR 264.119(c)]
- V.D.4. No later than 60 days after completion of the established post-closure care period for the OB/OD unit, the Permittee shall submit to the Regional Administrator, by registered mail, a certification that the post-closure care for the OB/OD unit was performed in accordance with the specifications in the approved Contingent Post-Closure Plan. The certification must be signed by the Permittee and an independent, registered professional engineer. Documentation supporting the independent, registered professional engineer's certification must be furnished to the Regional Administrator upon request. [40 CFR 264.120]

V.E. FINANCIAL ASSURANCE

V.E.1. In accordance with 40 CFR 264.140, the federal government is exempt from the financial assurance requirements of 40 CFR Part 264, Subpart H. Consequently, a cost estimate and financial assurance mechanism for post-closure care of the OB/OD unit are not required.

V.F. POST-CLOSURE PERMIT MODIFICATIONS

The Permittee must request a permit modification to authorize a change in the approved Contingent Post-Closure Plan. This request must be in accordance with applicable requirements of 40 CFR Parts 124 and 270, and must include a copy of the proposed amended Post-Closure Plan for approval by the Regional Administrator. The Permittee shall request a permit modification whenever changes in operating plans or facility design affect the approved Post-Closure Plan, there is a change in the expected year of final closure, or other events occur during the active life of the facility that affect the approved Post-Closure Plan. The Permittee must submit a written request for a permit modification at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the Post-Closure Plan. [40 CFR 264.118(d)]

MODULE VI - ADDITIONAL PERMIT CONDITION

The application for Permit modification for the open burning improvements (Permit Condition III.K.) shall also include a description of the measures, including confirmatory sampling, the Permittee shall take to ensure that the area of the OB/OD unit where the open burning component(s) will be located is evaluated and, as needed, measures taken to protect from installation of a permanent structure or structures over an area where unexploded ordnance, debris, or scrap are located. Any soil or material that must be removed during construction and that will not be redeposited at the unit for construction shall be properly characterized and removed to an authorized on- or off-site treatment, storage, disposal, or recycling facility. The certification of construction to be submitted by the Permittee to the Regional Administrator upon completion of the improvements (Permit Condition III.K.) shall include a description of how any excavated soil or material were characterized and managed.

MODULE VII - CORRECTIVE ACTION FOR SOLID WASTE
MANAGEMENT UNITS

The Permittee shall conduct corrective action based on the findings of the RFA. The specific corrective action conditions shall be implemented as provided in this Permit module.

SPECIAL CONDITIONS PURSUANT TO THE 1984 HAZARDOUS AND SOLID WASTE AMENDMENTS (HSWA) TO RCRA FOR FORT POLK, EPA ID NO. LA0214022725

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VII.

A. DEFINITIONS

For purposes of these special conditions pursuant to the 1984 Hazardous and Solid Waste Amendments to RCRA, the following definitions shall apply:

"Administrative Authority" means the Louisiana Department of Environmental Quality, or his/her designee, or, in the case of HSWA provisions for which the State is not authorized, the United States Environmental Protection Agency (EPA).

"Area of Concern" (AOC) means any discernable unit or area which, in the opinion of the Administrative Authority, may have received solid or hazardous waste or waste containing hazardous constituents at any time. The Administrative Authority may require investigation of the unit as if it were a SWMU. If shown to be a SWMU by the investigation, the AOC must be reported by the Permittee as a newly-identified SWMU. If the AOC is shown not to be a SWMU by the investigation, the Administrative Authority may determine that no further action is necessary and notify the Permittee in writing.

"CMS" means Corrective Measures Study.

"EPA" means the United States Environmental Protection Agency.

"Facility" means all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA.

"HSWA" means the 1984 Hazardous and Solid Waste Amendments to RCRA.

"Hazardous constituent" means any constituent identified in Appendix VIII of 40 CFR Part 261, or any constituent identified in Appendix IX of 40 CFR Part 264.

"Hazardous waste" means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. The term hazardous waste includes hazardous constituents.

"LDEQ" means the Louisiana Department of Environmental Quality.

[VII.A.]

"Permit" means the conditions embodied in these special conditions pursuant to the 1984 Hazardous and Solid Waste Amendments to RCRA.

"Permittee" means US Army Fort Polk, EPA ID No. LA0214022725.

"RCRA" means the Resource Conservation and Recovery Act of 1980 as amended by HSWA in 1984.

"RCRA Permit" means the full permit, with RCRA and HSWA portions.

"RFA" means RCRA Facility Assessment.

"RFI" means RCRA Facility Investigation.

"Release" means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes (including hazardous constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents).

"Solid Waste Management Unit" (SWMU) means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at facility at which solid wastes have been routinely and systematically released.

If, subsequent to the issuance of this permit, regulations are promulgated which redefine any of the above terms, the Administrative Authority may, at its discretion, apply the new definition to this permit.

VII.1. STANDARD CONDITIONS

2. Waste Minimization

The Permittee shall submit a certified plan according to 40 CFR 270.11 in writing, annually, by December 1, for the previous year ending September 30, specifying that:

[VII.B.]

a. the Permittee has a program in place to reduce the volume and toxicity of all hazardous wastes which are generated by the facility's operation to the degree determined to be economically practicable; and that the proposed method of treatment, storage, or disposal is the practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment. This certified plan must address the items below:

1) Any written policy or statement that outlines goals, objectives, and/or methods for source reduction and recycling of hazardous waste at the facility;

2) Any employee training or incentive programs designed to identify and implement source reduction and recycling opportunities;

3) Any source reduction and/or recycling measures implemented in the last five years or planned for the near future;

4) An itemized list of the dollar amounts of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous waste;

5) Factors that have prevented implementation of source reduction and/or recycling;

6) Sources of information on source reduction and/or recycling received at the facility (e.g., local government, trade associations, suppliers, etc.);

7) An investigation of additional waste minimization efforts which could be implemented at the facility. This investigation shall analyze the potential for reducing the quantity and toxicity of each waste stream through production reformulation, recycling, and all other appropriate means. The analysis shall include an assessment of the technical feasibility, cost, and potential waste reduction for each option;

8) The Permittee shall submit a flow chart or matrix detailing all hazardous wastes it produces by quantity, type, and building/area;

[VII.B.]

9) The Permittee shall demonstrate the need to use those processes which produce a particular hazardous waste due to a lack of alternative processes or available technology that would produce less hazardous waste.

The Permittee shall include this certified plan in the operating record. This section applies to the RCRA Permit.

3. Dust Suppression

Pursuant to 40 CFR 266.23(b), the Permittee shall not use waste or used oil or any other material which is contaminated with dioxin, polychlorinated biphenyls (PCBs) or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment. This section applies to the RCRA Permit.

4. Permit Modification

a. If at any time for any of the reasons specified in 40 CFR 270.41, the Administrative Authority determines that modification of this Permit is necessary, the Administrative Authority may require the Permittee to request a permit modification per Permit Condition VII.B.3.b. or may initiate a modification according to 40 CFR 124.5, as follows:

1) Notify the Permittee in writing of the proposed modification and the date by which comments on the proposed modification must be received.

2) Publish a notice of the proposed modification in a locally distributed newspaper, broadcast the notice over a local radio station, mail a notice to all persons on the facility mailing list maintained according to 40 CFR 124.10(c)(1)(ix), and place a notice in the facility's information repository (a central source of all pertinent documents concerning the remedial action, usually maintained at the facility or some other public place in the vicinity of the permitted facility, such as a public library).

3) If the Administrative Authority receives no written comment on the proposed modification, the modification will become effective five (5) calendar days after the close of the comment period. The Administrative Authority will:

[VII.B.]

a) Notify the Permittee in writing of the final decision.

b) Notify individuals on the facility mailing list in writing that the modification has become effective and shall place a copy of the modified permit in the information repository, if a repository is required for the facility.

4) If the Administrative Authority receives written comment on the proposed modification, the Administrative Authority will make a final determination concerning the modification after the end of the comment period. The Administrative Authority will:

a) Notify the Permittee in writing of the final decision.

b) Provide notice of the final modification decision in a locally distributed newspaper and place a copy of the modified permit in the information repository, if a repository is required for the facility.

b. The Permittee may initiate a permit modifications proceeding under 40 CFR 270.42. All applicable requirements and procedures as specified in 40 CFR 270.42 shall be followed.

c. Modifications of the Permit do not constitute a reissuance of the Permit.

5. Permit Review

This Permit may be reviewed by the Administrative Authority five years after the date of permit issuance and may be modified as necessary as provided for in Permit Condition VII.B.3. Nothing in this section shall preclude the Administrative Authority from reviewing and modifying the Permit at any time during its term. This section applies to the RCRA Permit.

6. Compliance with Permit

Compliance with this Permit during its term constitutes compliance, for the purpose of enforcement, with 40 CFR Parts 264 and 266 only for those management practices specifically authorized by this Permit. The Permittee is also required to comply with Parts 260, 261, 262, and 263 as applicable.

[VII.B.]

7. Specific Waste Ban

- a. The Permittee shall not place in any land disposal unit the wastes specified in 40 CFR 268 after the effective date of the prohibition unless the Administrator has established disposal or treatment standards for the hazardous waste and the Permittee meets such standards and other applicable conditions of this Permit. Because OB/OD is a treatment process, it is not subject to the land disposal restrictions imposed by Sections 3004(d) through (m) of RCRA (52 Federal Register 46952, December 10, 1987).
- b. The Permittee may store wastes restricted under 40 CFR 268 solely for the purpose of accumulating quantities necessary to facilitate proper recovery, treatment, or disposal provided that it meets the requirements of 40 CFR 268.50(a)(2) including, but not limited to, clearly marking each tank or container.
- c. The Permittee is required to comply with all requirements of 40 CFR 268.7 as amended. Changes to the waste analysis plan will be considered permit modifications at the request of the Permittee, pursuant to 40 CFR 270.42.
- d. The Permittee shall perform a waste analysis at least annually or when a process changes, to determine whether the waste meets applicable treatment standards. Results shall be maintained in the operating record.
- e. The Permittee must comply with requirements restricting placement of hazardous wastes in or on land which become effective by statute or promulgated under Part 268, regardless of requirements in the Permit. Failure to comply with the regulations may subject the Permittee to enforcement action under Section 3008 of RCRA.

This section applies to the RCRA Permit.

8. Information Submittal

Failure to comply with any condition of the Permit, including information submittal, constitutes a violation of the Permit and is grounds for enforcement action, permit amendment, termination, revocation, suspension, or denial of permit renewal

[VII.B.]

application. Falsification of any submitted information is grounds for termination of this Permit (40 CFR 270.43).

The Permittee shall ensure that all plans, reports, notifications, and other submissions to the Administrative Authority required in this Permit are signed and certified in accordance with 40 CFR 270.11. A summary of the planned reporting requirements pursuant to this Permit is found in Table 1. Two (2) copies and one (1) 3.5" IBM compatible disk copy each of these plans, reports, notifications or other submissions shall be submitted to the Administrative Authority by Certified Mail or hand delivered to:

U.S. EPA, Region 6
Hazardous Waste Management Division
1445 Ross Avenue
Dallas, Texas 75202-2733

and

Louisiana Department of Environmental Quality
P.O. Box 82178
Louisiana 70884-2178

Hazardous Waste Division
Baton Rouge,

9. Plans and Schedules Incorporation Into Permit

All plans and schedules required by this Permit are, upon approval by the Administrative Authority, incorporated into this Permit by reference and become an enforceable part of this Permit. Since required items are essential elements of this Permit, failure to submit any of the required items or submission of inadequate or insufficient information may subject the Permittee to enforcement action under Section 3008 of RCRA which may include fines, suspension, or revocation of the Permit.

Any noncompliance with approved plans and schedules shall be termed noncompliance with this Permit. Written requests for extensions of due dates for submittals may be granted by the Administrative Authority in accordance with Permit Condition VII.B.3.

[VII.B.]

If the Administrative Authority determines that actions beyond those provided for, or changes to what is stated herein, are warranted, the Administrative Authority may modify this Permit according to procedures in Permit Condition VII.B.3.

10. Data Retention

All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to this Permit shall be maintained at the facility during the term of this Permit, including any reissued Permits.

B. SPECIFIC CONDITION - CLOSURE [RESERVED]

VII.C. SPECIAL CONDITIONS

The following special conditions will need to be addressed for the specified solid waste management units (SWMUs) and area of concern (AOC) as part of the investigation required for corrective action.

1. SWMU No. 19 - Chaffee Road Landfarm (w/runoff pond)

The wastes landfarmed may contain potential RCRA characteristic and listed hazardous wastes. What tests have been conducted on the landfarm to verify that treatment of wastes is actually occurring? Please provide the Administrative Authority with sample and analysis results from the January 1988 discharges.

2. SWMU No. 21 - Construction Debris Landfill

Please describe why the facility believes that no hazardous wastes were disposed in this landfill. Based on the facility's response a determination will be made if an RFI must be undertaken.

3. SWMU No. 40 - Southeastern 4500 Block Directorate of Logistics Vehicle Maintenance Units

The facility will provide information to the Administrative Authority on the six (6) ground water monitoring wells located in the vicinity of the fuel island. This will include details on well construction, types of sampling and analysis, and the results of any past well sampling.

[VII.D.]

4. SWMU No. 42 - Original Firefighter Training Area

An investigation completed in 1986 included the installation of two (2) borings and monitoring wells in the vicinity of the original firefighter training area. This investigation was unavailable during the RFA. The report on this investigation must be submitted to EPA within 30 calendar days of the effective date of this permit.

5. SWMU No. 44 - DOL Paint Booth and Paint SAP

Is there any analytical data available concerning the status (hazardous/non-hazardous) of the paint booth sludge? Please provide information on the past and current waste management practices at the unit.

6. AOC No. 2 - Avenue K Mogas AST

During the writing of the RFA various remediation activities were being undertaken at this area. The requirement for submittal of an RFI Workplan is delayed until these activities are completed and an additional investigation of the final extent and level of contamination is completed. A report on this investigation is to be submitted to the Administrative Authority within 90 calendar of completion of the investigation.

The following units have been preliminarily investigated by Fort Polk. A summary report the findings of these investigations and the present status of remediation must be submitted within 45 calendar days of the effective date of this permit. The Administrative Authority feels that these units are potential candidates for Interim Measures by the facility.

SWMU No. 17 - Mill Creek Landfill

SWMU No. 47 - 4700 Block Vehicle Maintenance Units

VII.D. CORRECTIVE ACTION

1. Corrective Action for Releases: Section 3004(u) of RCRA, as amended by HSWA, and 40 CFR 264.101, require that permits issued after November 8, 1984, address corrective action for releases of hazardous waste including hazardous constituents from any SWMU at the facility, regardless of when the waste was placed in the unit.

[VII.D.]

2. Releases Beyond Facility Boundary

a. The Permittee shall notify the Administrative Authority verbally, within 24 hours of discovery, of any release of hazardous waste or hazardous constituents that has the potential to migrate off-site.

b. Section 3004(v) of RCRA as amended by HSWA, and Federal regulations promulgated as 40 CFR 264.101(c), require corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where offsite access is denied.

[VII.E.]

3. **Financial Responsibility:** Assurances of financial responsibility for corrective action shall be provided as specified in the Permit following major modification for remedy selection. The federal government is exempt from this requirement.

4. **Dispute Resolution**

a. The parties shall use their best efforts to informally and in good faith resolve all disputes or differences of opinion. If, however, disputes arise concerning the corrective action which the parties are unable to resolve informally, including but not limited to, disputes over implementation of workplans, approval of documents, scheduling of any work, selection, performance or completion of any corrective action, or any other obligation assumed hereunder, the Permittee shall present a written notice of such dispute and the basis for the objections to EPA within ten business days of the receipt of EPA's disapproval, decision or directive. The notice shall set forth the specific points of the dispute, the position the Permittee maintains should be adopted as consistent with the Permit's requirements, the basis therefore, and any matters which it considers necessary for EPA's proper determination. EPA shall provide to the Permittee a written statement of its decision on the pending dispute, which shall be incorporated into the final Permit unless the Permittee requests an opportunity for a conference in accordance with Permit Condition VII.E.4.b. The existence of a dispute as defined herein, and the consideration of such matters which are placed into dispute shall not excuse, toll, or suspend any compliance obligation or deadline while the dispute resolution process is pending.

b. If the Permittee objects to any EPA determination regarding any requirement by EPA that the Permittee perform work, the Permittee shall, within ten days of its receipt of EPA's decision pursuant to Permit Condition VII.E.4.a., notify EPA in writing of its objections, and may request that the Hazardous Waste Management Division Director convene an informal conference. The Director shall state in writing his decision regarding the factual issues in dispute. Such decision shall be the final resolution of the dispute and shall be implemented immediately by the Permittee according to the schedule contained therein.

VII.E. REPORTING REQUIREMENTS

1. The Permittee shall submit, in accordance with Permit Condition VII.B.7., signed quarterly progress reports of all activities (i.e., RFI, CMS) conducted pursuant to the provisions of this Permit beginning no later than ninety (90) calendar days from the effective date of this Permit. This first progress report shall satisfy the reporting requirements for the particular calendar quarter that occurs within the 90 calendar days from Permit issuance. Thereafter, progress reports will be made within each consecutive calendar quarter of the year(s). These reports shall contain:
 - a. A description of the work completed and an estimate of the percentage of work completed;
 - b. Summaries of all findings, including summaries of laboratory data;
 - c. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems;
 - d. Projected work for the next reporting period;
 - e. Summaries of contacts pertaining to corrective action or environmental matters with representatives of the local community, public interest groups or State government during the reporting period;
 - f. Changes in key project personnel during the reporting period; and
 - g. Summaries of all changes made in implementation during the reporting period.
2. Copies of other reports (e.g., inspection reports), drilling logs and laboratory data shall be made available to the Administrative Authority upon request.
3. In addition to the written reports, at the request of the Administrative Authority, the Permittee shall provide status review through semi-annual briefings with the Administrative Authority.

VII.F. NOTIFICATION REQUIREMENTS FOR AND ASSESSMENT OF NEWLY-IDENTIFIED SWMUs

[VII.G.]

1. The Permittee shall notify the Administrative Authority, in writing, of any newly-identified SWMU(s) (i.e., a unit not specifically identified during the RFA), discovered in the course of ground water monitoring, field investigations, environmental audits, or other means, no later than thirty (30) calendar days after discovery. The notification shall include the following items, to the extent available:
 - a. The location of the newly-identified SWMU in relation to other SWMUs;
 - b. The type and function of the unit;
 - c. The general dimensions, capacities, and structural description of the unit (supply any available drawings);
 - d. The period during which the unit was operated;
 - e. The specifics, to the extent available, on all wastes that have been or are being managed at the SWMU; and
 - f. Results of any sampling and analysis required for the purpose of determining whether releases of hazardous waste including hazardous constituents have occurred, are occurring, or are likely to occur from the unit.
2. Based on the results of this Notification, the Administrative Authority will determine the need for further investigations or corrective measures at any newly-identified SWMU(s). If the Administrative Authority determines that such investigations are needed, the Administrative Authority may require the Permittee to prepare a plan for such investigations. This plan will be reviewed for approval as part of the RFI Workplan or a new RFI Workplan under Permit Condition VII.J.3. The Permit will be modified according to Permit Condition VII.B.3. to incorporate the investigation requirements for the newly-identified SWMU(s), if required.

VII.G. NOTIFICATION REQUIREMENTS FOR NEWLY-DISCOVERED RELEASES AT SWMU(s)

The permittee shall notify the Administrative Authority in writing, no later than fifteen (15) calendar days after discovery, of any release(s) of hazardous waste or hazardous constituents associated with a SWMU discovered during the course of ground water

[VII.G.]

monitoring, field investigation, environmental auditing, or other means. Such newly-discovered releases may be from newly-identified units or from units for which, based on the findings of the RFA, the Administrative Authority had previously determined no further investigation was necessary. The Administrative Authority may require further investigation and/or interim measures for the newly-identified release(s), and may require the Permittee to

[VII.H.]

prepare a plan for the investigation and/or interim measure. The plan will be reviewed for approval as part of the RFI Workplan or a new RFI Workplan under Permit Condition VII.J.3. The Permit will be modified according to Permit Condition VII.B.3. to incorporate the investigation, if required.

VII.H. INTERIM MEASURES

1. If during the course of any activity initiated under this Permit, the Administrative Authority determines that a release or potential release of hazardous constituents from a SWMU poses a threat to human health and the environment, the Administrative Authority may require interim measures. The Administrative Authority shall determine the specific measure(s) or require the Permittee to propose a measure(s). The interim measure(s) may include a permit modification, a schedule for implementation, and a written plan. The Administrative Authority shall notify the Permittee in writing of the requirement to perform interim measures. The Administrative Authority shall modify this Permit according to Permit Condition VII.B.3. to incorporate interim measures into the Permit.
2. The following factors will be considered by the Administrative Authority in determining the need for interim measures:
 - a. Time required to develop and implement a final remedy;
 - b. Actual and potential exposure to human and environmental receptors;
 - c. Actual and potential contamination of drinking water supplies and sensitive ecosystems;
 - d. The potential for further degradation of the medium in the absence of interim measures;
 - e. Presence of hazardous wastes in containers that may pose a threat of release;
 - f. Presence and concentration of hazardous waste including hazardous constituents in soil that have the potential to migrate to ground water or surface water;
 - g. Weather conditions that may affect the current levels of contamination;

[VII.I.]

- h. Risks of fire, explosion, or accident; and
- i. Other situations that may pose threats to human health and the environment.

VII.I. RFI WORKPLAN

1. The RFI Workplan as specified in Permit Condition VII.R.3. shall be submitted to the Administrative Authority within 90 days of the effective date of this Permit. The RFI Workplan must address releases of hazardous waste or hazardous constituents to all media for those SWMUs and AOCs listed in Table 2. The SWMU numbers are from the RFA Report, prepared by PRC Environmental Management, Inc., dated December 1993.
 - a. The Workplan shall describe the objectives of the investigation and the overall technical and analytical approach to completing all actions necessary to characterize the direction, rate, movement, and concentration of releases of hazardous waste or hazardous constituents from specific units or groups of units, and their actual or potential receptors. The RFI Workplan shall detail all proposed activities and procedures to be conducted at the facility, the schedule for implementing and completing such investigations, the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFI. The Scope of Work for a RCRA Facility Investigation (RFI) is in Permit Condition VII.R.
 - b. The RFI Workplan shall describe sampling, data collection quality assurance, and data management procedures, including formats for documenting and tracking data and other results of investigations, and health and safety procedures.
 - c. Development of the RFI Workplan and reporting of data shall be consistent with the following EPA guidance documents or the equivalent thereof:
 - 1) RCRA Facility Investigation Guidance Document (EPA 530/SW-89-031) May 1989;
 - 2) RCRA Groundwater Monitoring Technical Enforcement Guidance Document (OSWER 9950.1) September 1986; and

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3) Test Methods for Evaluating Solid Waste (SW 846, 2nd ed.) 1982.

2. After the Permittee submits the Workplan, the Administrative Authority will either approve, disapprove, or modify the Workplan in writing.

If the Administrative Authority approves the workplan, the Permittee shall begin implementing the plan within two weeks (14 days) of receipt of approval, according to the schedule contained in the plan. All approved workplans become incorporated into this Permit as per Permit Condition VII.B.8.

In the event of disapproval (in whole or in part) of the workplan, the Administrative Authority shall specify deficiencies in writing. The Permittee shall modify the plan correct these within the time frame specified in the notification of disapproval by the Administrative Authority. The modified workplan shall be submitted in writing to the Administrative Authority for review. Should the permittee take exception to all or part of the disapproval, the Permittee shall submit a written statement of the grounds for the exception within 10 days of receipt of the disapproval per Permit Condition VII.E.4.

3. The Administrative Authority shall review for approval as part of the RFI Workplan or as a new workplan any plans developed pursuant to Permit Condition VII.G. addressing further investigations of newly-identified SWMUs, or Permit Condition VII.H. addressing new releases from previously-identified SWMUs.

VII.J. RFI IMPLEMENTATION

Upon receipt of written approval from the Administrative Authority for the RFI Workplan, the Permittee shall implement the RFI according to the schedules and in accordance with the approved RFI Workplan and the following:

1. The Permittee shall notify EPA and the LDEQ at least 10 days prior to any sampling, testing, or monitoring activity required by this Permit to give Agency personnel the opportunity to observe investigation procedures and/or split samples.
2. Substantive deviations from the approved RFI Workplan which are necessary during implementation of the investigations must be approved by the Administrative

[VII.J.]

Authority and fully documented and described in the progress reports and in the RFI Final Report.

VII.K. RFI FINAL REPORT AND SUMMARY

1. Within sixty (60) calendar days after the completion of the RFI, the Permittee shall submit an RFI Final Report and Summary. The RFI Final Report shall describe the procedures, methods, and results of all investigations as described in Permit Condition VII.R.5. This includes SWMUs and their releases, the type and extent of contamination at the facility, sources and migration pathways, and actual or potential receptors. The RFI Final Report shall present all information gathered under the approved RFI Workplan. The RFI Final Report must contain adequate information to support further corrective action decisions at the facility. The Summary shall summarize the RFI Final Report.
2. After the Permittee submits the RFI Final Report and Summary, the Administrative Authority shall either approve or disapprove them in writing.

If the Administrative Authority approves the RFI Final Report and Summary, the Permittee shall mail the approved Summary to all individuals on the facility mailing list established pursuant to 40 CFR 124.10(c)(1)(ix), within fifteen (15) calendar days of receipt of approval.

If the Administrative Authority determines the RFI Final Report and Summary do not fully meet the objectives stated in Permit Condition VII.R., the Administrative Authority may disapprove the RFI Final Report and Summary. If the Administrative Authority disapproves the Report, the Administrative Authority shall notify the Permittee in writing of the Report's deficiencies and specify a due date for submittal of a revised Final Report and Summary. Once approved, the Summary shall be mailed to all individuals on the facility mailing list as specified above.

VII.L. DETERMINATION OF NO FURTHER ACTION

1. Based on the results of the RFI and other relevant information, the Permittee may submit an application to the Administrative Authority for a Class III permit modification under 40 CFR 270.42(c) to terminate the RFI/CMS process for a specific unit. This permit modification application must contain information demonstrating that there are no releases of hazardous waste including hazardous constituents from a particular SWMU at the facility that pose threats to human health and/or the environment, as well as additional information required in 40 CFR 270.42(c).

[VII.M.]

If, based upon review of the Permittee's request for a permit modification, the results of the RFI, and other information, including comments received during the sixty (60) day public comment period required for Class III permit modifications, the Administrative Authority determines that releases or suspected releases which were investigated either are non-existent or do not pose a threat to human health and/or the environment, the Administrative Authority will grant the requested modification.

2. If necessary to protect human health or the environment, a determination of no further action shall not preclude the Administrative Authority from requiring continued or periodic monitoring of air, soil, ground water, or surface water, when site-specific circumstances indicate that releases of hazardous waste or hazardous constituents are likely to occur.
3. A determination of no further action shall not preclude the Administrative Authority from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates a release or likelihood of a release from a SWMU at the facility that is likely to pose a threat to human health or the environment. In such a case, the Administrative Authority shall initiate a modification to the Permit according to Permit Condition VII.B.3.

VII.M. CMS PLAN

1. If the Administrative Authority has reason to believe that a SWMU has released concentrations of hazardous constituents, or if the Administrative Authority determines that contaminants present a threat to human health or the environment given site-specific exposure conditions, the Administrative Authority may require a CMS and shall notify the Permittee in writing. The notification may also specify remedial alternatives to be evaluated by the Permittee during the CMS.
2. The Permittee shall submit a CMS Plan to the Administrative Authority within forty five (45) calendar days from notification of the requirement to conduct a CMS. The Scope of Work for a CMS Plan is in Permit Condition VII.S.3.

The CMS Plan shall provide the following information:

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- a. A description of the general approach to the investigation, and potential remedies;
 - b. A definition of the overall objectives of the study;
 - c. Specific plans for evaluating remedies to ensure compliance with remedy standards;
 - d. Schedules for conducting the study; and
 - e. The proposed format for the presentation of information.
3. After the Permittee submits the CMS Plan, the Administrative Authority will either approve, disapprove, or modify the plan in writing.

If the Administrative Authority approves the CMS Plan, the Permittee shall implement the plan per Permit Condition VII.O.

In the event of disapproval (in whole or in part) of the CMS Plan, the Administrative Authority shall specify deficiencies in writing. The Permittee shall modify the plan to correct these within the time frame specified in the notice of deficiency. The modified CMS Plan shall be submitted in writing to the Administrative Authority for review. Should the permittee take exception to all or part of the disapproval, the Permittee shall submit a written statement of the grounds for the exception within 10 days of receipt of the disapproval per Permit Condition VII.E.4.

VII.N. CMS IMPLEMENTATION

No later than fourteen (14) calendar days after the Permittee has received written approval from the Administrative Authority for the CMS Plan, the Permittee shall implement the Corrective Measures Study according to the schedules specified and in accordance with the approved CMS Plan. All approved plans become incorporated into this Permit as per Permit Condition VII.B.8.

VII.O. CMS FINAL REPORT AND SUMMARY

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1. Within sixty (60) calendar days after the completion of the CMS, the Permittee shall submit a CMS Final Report and Summary. The Summary shall summarize the Final Report. The CMS Final Report shall discuss the results of investigations of each remedy studied and of any bench-scale or pilot tests conducted. It must include an evaluation of each remedial alternative. The CMS Final Report shall present all information gathered during the CMS, and must contain adequate information to support the remedy selection process. In the CMS Final Report, the Permittee shall propose a corrective action program that shall:
 - a. attain compliance with corrective action objectives for hazardous constituents in each medium, as established in Permit Condition VII.S.;
 - b. control sources of releases;
 - c. meet acceptable waste management requirements; and
 - d. protect human health and the environment.
2. After the Permittee submits the CMS Final Report and Summary, the Administrative Authority will either approve or disapprove them in writing.

If the Administrative Authority approves the CMS Final Report and Summary, the Permittee shall mail the approved Summary to all individuals on the facility mailing list established pursuant to 40 CFR 124.10(c)(1)(ix), within fifteen (15) calendar days of receipt of approval.

If the Administrative Authority determines the CMS Final Report and Summary do not fully meet the objectives stated in Permit Condition VII.S., the Administrative Authority may disapprove the CMS Final Report and Summary. If the Administrative Authority disapproves the Report, the Administrative Authority shall notify the Permittee in writing of the Report's deficiencies and specify a due date for submittal of a revised Final Report and Summary. Once approved, the Summary shall be mailed to all individuals on the facility mailing list as specified above.

3. Based on preliminary results and the CMS Final Report, the Administrative Authority may require the Permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

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VII.P. CORRECTIVE MEASURE (REMEDY) SELECTION AND IMPLEMENTATION

Within fifteen (15) calendar days from receipt of approval of CMS Final Report and Summary, the Permittee shall submit a Permit Modification request according to Permit Condition VII.B.3., for corrective measure (remedy) selection, based on the approved CMS Final Report. The resultant modified permit will include schedules for remedy implementation.

VII.Q. RFI SCOPE OF WORK

1. Purpose

The purpose of the RFI is to determine whether a release of hazardous wastes or hazardous constituents has occurred and, if so, the nature and extent of releases of hazardous wastes or hazardous constituents from solid waste management units. The required information shall include each item specified under Tasks I-III. The Permittee shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RFI.

If the Permittee believes that certain requirements of the Scope of Work are not applicable, the specific requirements shall be identified and a detailed rationale for inapplicability shall be provided.

2. Scope

The RFI consists of three tasks:

Task I: RFI Workplan

- a. Introduction
- b. Environmental Setting
- c. Source Characterization
- d. Contamination Characterization
- e. Potential Receptor Identification
- f. Data Collection Quality Assurance Plan
- g. Data Management Plan
- h. Health and Safety Plan
- i. Community Relations Plan
- j. Project Management Plan

Task II: RCRA Facility Investigation

Task III: RFI Final Report and Summary

3. Task I: RFI Workplan

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The Permittee shall prepare a RFI Workplan as specified in Permit Condition VII.J. and the following. The RFI Workplan shall provide for and address the following information needs:

a. Introduction

1) Facility Description

The introduction shall summarize the regional location, pertinent boundary features, general facility physiography, hydrogeology, and historical use of the facility for the treatment, storage, or disposal of solid and hazardous waste. Information from existing reports and studies is acceptable, as long as the source of this information is documented, pertinent, and reflective of current conditions. This section shall include:

a) Map(s) depicting the information specified below. All maps shall be consistent with requirements set forth in 40 CFR 270.14 and shall be of sufficient detail and accuracy to locate all current and future work performed at the site.

- (1) general geographic location;
- (2) property lines, with the owners of all adjacent property clearly indicated, and all land previously owned and/or used by the Permittee around the facility;
- (3) topography, waterways, wetlands, floodplains, water features, and drainage patterns;
- (4) all tanks, buildings, utilities, paved areas, rights-of-way, and other features;
- (5) all solid waste management units;
- (6) all known past solid or hazardous waste treatment, storage and disposal areas or units regardless of whether they were active on November 19, 1980;

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(7) surrounding land uses (residential, commercial, agricultural, recreational); and

(8) the location of all production and ground water monitoring wells. These wells shall be clearly labeled and ground and top of casing elevations included (these elevations may be included as an attachment).

b) A history and description of ownership and operation, solid and hazardous waste generation, treatment, storage and disposal activities at the facility.

c) A summary of approximate dates or periods of past waste releases, identification of the materials released, the amount released, the location released, and a description of the response actions conducted (local, state, or Federal response units, or private parties), including any inspection reports or technical reports generated as a result of the response.

d) A reference to all environmental, geologic, and hydrogeologic studies performed by all parties, at or near the facility, with a short summary of the purpose, scope, and significant findings thereof.

e) A reference to all environmental permits, applied for and/or received, the purpose thereof, and a short summary of requirements.

2) Nature and Extent of Contamination

a) The Introduction shall summarize all possible source areas of contamination. This, at a minimum, should include all SWMUs. For each area, the Permittee shall identify the following:

- (1) location of unit/area on a facility map;
- (2) quantities of solid, hazardous, and radiochemical wastes;
- (3) quantities of radiochemical and hazardous constituents, to the extent known; and
- (4) identification of areas where additional information is necessary.

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b) The Permittee shall prepare an assessment and description of the existing degree and extent of contamination. This should include:

(1) available monitoring data and qualitative information on locations and levels of contamination at the facility;

(2) all potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality; and

(3) the potential impact(s) on human health or the environment, including demography, ground water and surface water use, and land use.

3) Implementation of Interim Measures

The Permittee shall document and report on all interim measures which were or are being undertaken at the facility, including under state or Federal compliance orders, other than those specified in the Permit. This shall include:

a) Objectives of the interim measures: how the measure is mitigating a potential threat to human health or the environment and/or is consistent with and integrated into requirements for a long term solution;

b) Schedules for design, construction and monitoring; and

c) Schedule for progress reports.

b. Environmental Setting

The Workplan shall provide for collection of information to supplement and verify existing information on the environmental setting at the facility. The Workplan shall provide for characterization of the following:

1) Hydrogeology

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The Workplan shall describe in detail a program to evaluate hydrogeologic conditions at the facility. This program shall provide for least the following information needs:

- a) A description of the regional, local, facility-wide, and SWMU-specific geologic and hydrogeologic characteristics affecting ground water flow beneath the facility.
- b) An analysis of any topographic features including surface water bodies that might influence the ground water flow system.
- c) A representative and accurate classification and description of the hydrogeologic units which may be part of migration pathways at the facility (i.e., the aquifers and any intervening saturated and unsaturated units) based on field data, tests (e.g., gamma and neutron logging of existing and new wells, piezometers and borings), and cores.
- d) The extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of migration pathways based on field studies and cores, structural geology, and hydrogeologic cross sections, including:
 - (1) unconsolidated sand and gravel deposits;
 - (2) zones of fracturing or channeling in consolidated or unconsolidated deposits; and
 - (3) zones of high permeability or low permeability that might direct and restrict the flow of contaminants.
- e) A description of representative water level or fluid pressure based on data obtained from ground water monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source. Information needs include: potentiometric surface maps; hydrologic cross sections showing vertical gradients; vertical and horizontal components of flow; temporal changes in hydraulic gradients and flow nets.

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f) A description of man-made influences that may affect site hydrogeology such as active and inactive local water-supply and production wells, pipelines, french drains, and ditches.

2) Soils

The Permittee shall describe in detail a program designed to characterize soil and rock units above the water table. Such characterization shall include, but is not limited to, the following information: surface soil distribution; soil profile, including ASTM and USCS classifications of soils; transects of soil stratigraphy; saturated hydraulic conductivity; porosity; cation exchange capacity (CEC); soil pH; particle size distribution; depth to water table; moisture content; effect of stratification on unsaturated flow; infiltration; evapotranspiration; residual concentration of contaminants in soil; total natural organic carbon content; and mineral and metal content.

c. Source Characterization

The Permittee shall describe in detail a program designed to completely characterize the wastes and the areas where wastes have been placed, including: type, quantity, physical form, composition, disposition (containment and nature of wastes), and the facility characteristics affecting releases (e.g., facility security, engineered barriers). This shall include quantification of the following specific characteristics, at each source area:

1) Unit/disposal area characteristics, including but not limited to: location of unit/disposal area; type of unit/disposal area; design features; operating practices (past and present); period of operation; age of unit/disposal area; general physical conditions; and method used to close the unit/disposal area.

2) Waste characteristics, including but not limited to: type of waste placed in unit (hazardous classification, quantity, chemical composition); physical and chemical characteristics (physical form, physical description, temperature, Ph, general chemical class, molecular weight, density, boiling point, viscosity, solubility in water, solubility in solvents, cohesiveness, vapor pressure); and migration and dispersal characteristics of the waste (sorption coefficients, biodegradability, photodegradation rates, hydrolysis rates, chemical transformations).

d. Contamination Characteristics

The Permittee shall describe in detail a program to collect analytical data on ground water, soils, surface water, sediment, and subsurface gas contamination when necessary to characterize contamination from a SWMU. The data shall be sufficient to define the extent, origin, direction, and rate of movement of contamination plumes. Data required shall include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identity of the individual(s) performing the sampling and analysis. Each medium (ground water, surface water and sediments, soil, air, and gas) must be investigated. If the Permittee believes certain media could not be affected by a release from a specific unit, a detailed justification for not investigating those media must be provided. The Permittee shall address the following types of contamination at the facility:

1) Ground Water Contamination

The Workplan shall describe in detail a program of ground water investigation to characterize any plumes of contamination at the facility. The program shall at a minimum provide for the following information needs:

- a) a description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the facility;
- b) the horizontal and vertical direction of contamination movement;
- c) the velocity of contaminant movement;
- d) the horizontal and vertical concentrations of any 40 CFR Part 264 Appendix IX constituents reasonably expected to be present in the plume;
- e) an evaluation of factors influencing the plume movement; and
- f) an extrapolation of future contaminant movement.

2) Soil Contamination

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The Permittee shall describe in detail a program to characterize contamination of soil and rock units above the water table in the vicinity of the contaminant release. The program shall provide for the following information needs

a) a description of the vertical and horizontal extent of contamination;

b) a description of contaminant and soil chemical properties within the contaminant source area. This includes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation, natural total organic carbon content, and other factors that might affect contaminant migration and transformation.

c) plume migration and transformation; specific contaminant concentrations; the velocity and direction of contaminant movement; and an extrapolation to future contaminant movement.

3) Surface Water and Sediment Contamination

The Permittee shall describe in detail a program to characterize contamination in surface water bodies and sediment resulting from contaminant releases at the facility. The investigation shall at minimum include the following:

a) a description of the surface water body including location, elevation, flow, velocity, depth, width, seasonal fluctuations, flooding tendencies, drainage patterns, and evapotranspiration rates.

b) a description of sediment characteristics including depositional area, thickness, mineralogy, grain size, density, ion exchange capacity, and total natural organic carbon content.

c) maps for all areas included in surface water and sediment investigations which meet requirements in 40 CFR 270.14 and which are sufficiently detailed and accurate to depict all the information required.

d) a description of the horizontal and vertical extent of any immiscible or dissolved plumes originating from the facility, and the extent of contamination in the underlying sediments;

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e) the horizontal and vertical direction and velocity of contaminant movement;

f) an evaluation of the physical, biological, chemical, and radiochemical factors influencing contaminant movement;

g) an extrapolation to future contaminant movement;

h) a description of the chemistry of the contaminated surface waters and sediments. This includes Ph, temperature, total dissolved solids, total suspended solids, biochemical oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients, chemical oxygen demand, total organic carbon, and specific contaminant concentrations.

4) Air Contamination

The Permittee shall describe in detail a program to characterize particulate and gaseous contaminants released into the atmosphere. This investigation shall provide the following information: a description of the horizontal and vertical direction and velocity of contaminant movement; the rate and amount of the release and the chemical, radiochemical, and physical composition of the contaminants released, including horizontal and vertical concentration profiles.

5) Subsurface Gas

The Permittee shall describe in detail a program to characterize the nature, rate and extent of releases of reactive gases from the units. Such a program shall include, but is not limited to: provisions for monitoring subsurface gases released from the unit, and an assessment of the potential for threat to human health and/or the environment.

e. Potential Receptors

The Permittee shall describe in detail a program to collect data to describe human populations and environmental systems that are susceptible to contaminant exposure from the facility. Chemical and radiochemical analysis of biological

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samples may be needed. Data on observable effects in ecosystems may also be required. The following characteristics shall be identified:

1) Local uses and possible future uses of ground water, including:

a) type of use (i.e., potable, domestic, agricultural, residential, industrial, municipal)

b) location of all ground water wells, names of owners or tenants at those locations, USGS/DOTD well designations, and current use of those wells within a 1 mile radius of facility.

2) Local uses and possible future uses of surface waters within a 1.5 mile radius of the facility, including domestic and municipal, recreational, agricultural, industrial and environmental.

3) Human use of or access to the facility and adjacent lands, including but not limited to recreation, hunting, residential, commercial, and industrial.

4) A demographic profile of people who use or have access to the facility and adjacent land, including, but not limited to age, gender, and sensitive subgroups.

5) A description of the local ecology, including biota in surface water bodies on, adjacent to, or affected by the facility, and a description of any endangered or threatened species near the facility.

f. Data Collection Quality Assurance Plan

The Permittee shall prepare a plan to document all monitoring procedures: sampling, field measurements, and sample analysis performed at the facility during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data, and resulting decisions are technically sound, statistically valid, and properly documented.

1) The strategy section of the Data Collection Quality Assurance Plan shall include but not be limited to the following:

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a) description of the intended uses for the data, and the necessary level of precision and accuracy for those intended uses;

b) description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data; and

c) schedule and information to be provided in quality assurance reports, including at least:

(1) periodic assessment of measurement data accuracy, precision, and completeness;

(2) results of performance audits;

(3) results of systems audits; and

(4) significant quality assurance problems and resolutions.

2) The Sampling and Field Measurements Section of the Data Collection Quality Assurance Plan shall at least discuss:

a) selecting appropriate sampling and field measurements locations, depths, etc.;

b) providing a statistically sufficient number of sampling and field measurement sites;

c) determining conditions under which sampling or field measurements shall be conducted;

d) determining which parameters are to be measured and where;

e) selecting the frequency of sampling and length of sampling period;

f) selecting the types of sample (e.g., composites vs. grabs) and number of samples to be collected;

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g) delineating procedures designed to prevent contamination of sampling or field measurements equipment and cross contamination between sampling points;

h) documenting field sampling operations and procedures;

i) selecting appropriate sample containers;

j) preserving samples;

k) controlling chain-of-custody; and

l) disposing of all contaminated materials generated by activities in a manner compliant with all state and Federal regulations.

3) The Sample Analysis shall include:

a) chain-of-custody procedures;

b) sample storage procedures and holding times;

c) sample preparation methods;

d) analytical procedures;

e) calibration procedures and frequency;

f) data reduction, validation and reporting; and

g) frequency of internal quality control checks and laboratory performance audits.

g. Data Management Plan

The Permittee shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures (data record), project file requirements, and project-related progress reporting procedures and documents.

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1) The data record shall include at least the following for all sample and field measurements: unique measurement code; measurement location; measurement type; laboratory ID number; property or component analyzed; and results of analysis.

2) The Data Management Plan shall provide the format to be used to present the data and conclusions of the investigation, etc.

a) The following shall be presented in tables: raw data; data sorted by significant features such as location, media, constituent; data reduction for statistical analysis; and summary data.

b) The following shall be presented in graphical formats (e.g., bar graphs, line graphs, plan maps, isopleth plots, cross-sections, three-dimensional displays, etc.): sampling location and grid; levels of contamination at each sampling location; geographical extent of contamination; and changes in concentration relative to source, time, depth, and other parameters.

h. Health and Safety Plan

1) The Permittee shall prepare a facility Health and Safety Plan, which shall include:

a) a description of the facility including availability of resources such as roads, water supply, electricity and telephone service;

b) a description of the known hazards and evaluation of the risks associated with each activity conducted, including but not limited to on and off-site exposure to contaminants during implementation of interim measures;

c) a list of key personnel and alternatives responsible for site safety, response operations, and for protection of public health;

d) a delineation of the work area;

e) a description of levels of protection to be worn by personnel in the work area;

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- f) procedures established to control site access;
- g) decontamination procedures for personnel and equipment;
- h) site emergency procedures;
- i) emergency medical care procedures for injuries and toxicological problems;
- j) requirements for an environmental field monitoring program;
- k) routine and special training requirements for responders; and
- l) procedures for protecting workers from weather-related problems.

2) The Facility Health and Safety Plan shall comply with:

- a) OSHA regulations, particularly 29 CFR 1910 and 1926; and
- b) State and local regulations, as applicable.

i. Community Relations Plan

The Permittee shall prepare a plan for dissemination of information to the public regarding investigation activities and results.

j. Project Management Plan

The Permittee shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, budget, and key project personnel. The project management plan will also include a description of qualifications of key project personnel performing or directing the RFI, including contractor personnel. This plan shall also document the overall management approach to the RFI.

4. Task II: RCRA Facility Investigation

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The facility investigation activities shall follow the RFI Workplan. All sampling and analyses shall be conducted in accordance with the Data Collection Quality Assurance Plan. All sampling locations shall be documented in a log and identified on a detailed site map. During the RFI, it may be necessary to revise the RFI Workplan to increase or decrease the detail of information collected to accommodate the facility specific situation.

The Permittee shall conduct investigations of SWMUs previously identified with known or suspected releases of contamination to characterize the facility (Environmental Setting), define the source (Source Characterization), define the degree and extent of contamination (Contamination Characterization), and identify actual or potential receptors.

The investigations should result in data of adequate technical quality to develop and evaluate corrective measures alternatives during the Corrective Measures Study, when necessary.

5. Task III: RFI Final Report and Summary

The Permittee shall analyze all facility investigation data collected during the RFI process and prepare a detailed report on the type and extent of contamination at the facility including sources and migration pathways. All information generated during the investigation shall be presented and analyzed. All evidence and procedures used for making any determinations (e.g., velocity of groundwater, extent of contamination) shall be fully documented. The report shall describe extent of contamination (qualitative/quantitative) in relation to background levels indicative for the area. The report shall contain the results of all tests, calculations, inspections, record searches, and observations. It shall contain soil and ground water contamination profiles, statistical comparisons, and the results of all sampling events conducted as part of the investigation. It shall display results in tables, graphs, maps, and cross sections as discussed in the Data Management Plan and Permit Condition VII.R.3.g.2.

The Permittee shall identify all relevant and applicable standards for the protection of human health or the environment (e.g., National Ambient Air Quality Standards, Federally-approved State water quality standards, ground water protection standards, etc.)

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Data shall be evaluated to ensure it is sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, to evaluate the potential threat to human health or the environment, and to support a CMS, if required. The report shall present all data in an Appendix.

6. General RFI Reporting Requirements

a. Two hard copies and one IBM compatible disk copy of all reports and data shall be submitted by the Permittee to the Administrative Authority as specified in Permit Condition VII.B.7.

b. The RFI Workplan shall be submitted by the Permittee to the Administrative Authority as described in Permit Condition VII.J.

c. The RFI Final Report and Summary shall be submit by the Permittee to the Administrative Authority as described in Permit Condition VII.L.

d. Within 90 days of the effective date of this Permit, the Permittee shall provide the Administrative Authority with signed, quarterly progress reports as specified in Permit Condition VII.F.1.

VII.R. CMS SCOPE OF WORK

1. Purpose

The purpose of the CMS is to develop and evaluate corrective measures alternatives and to recommend the corrective measure or measures to be taken. The required information shall include each item specified under CMS Tasks IV-VI. The Permittee will furnish the personnel, materials, and services necessary to prepare the CMS, except as otherwise specified.

If the Permittee believes that certain requirements of the Scope of Work are not applicable, the specific requirements shall be identified and the rationale for inapplicability shall be provided.

2. Scope

The Corrective Measure Study consists of three tasks:

Task IVCMS Plan

- a. Description of Current Situation
- b. Establishment of Corrective Action Objectives
- c. Description of Approach to CMS
- d. Schedule for CMS

Task V:Corrective Measures Study

- a. Identification of Corrective Measures Alternatives(s)
- b. Screening of Corrective Measures Alternatives(s)
- c. Development of Corrective Measures Alternative(s)
- d. Evaluation of Corrective Measures Alternative(s)
- e. Selection of Corrective Measures Alternative(s)

Task VICMS Final Report and Summary

3. Task IVCMS Plan

- a. Description of Current Conditions

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The Permittee shall briefly describe current conditions at the facility to update information provided in the RFI Final Report and Summary. This shall include previous and/or ongoing remedial activity or interim measures.

b. Establishment of Corrective Action Objectives

The Permittee shall propose to the Administrative Authority for review and approval, facility specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RFI, EPA guidance, and the requirements of any applicable Federal statutes and regulations.

c. Description of Approach to CMS

The Permittee shall describe the general approach to the corrective measures study. The approach shall include identification, development, screening, and evaluation of the corrective measures alternatives, as discussed in detail in Permit Condition VII.S.4. The Permittee shall describe specific plans for laboratory and bench-scale studies, or field studies, if needed. Specific plans for evaluating remedy effectiveness shall also be developed. The approach shall specify formats to be used for data presentation, including raw data, maps, charts, graphs, engineering schematics, construction design, etc.

d. Schedule

The Permittee shall develop a schedule for implementing the corrective measures study, and a schedule for submitting quarterly progress reports on the study implementation.

4. Task V:Corrective Measures Study

The CMS consists of five parts: identification, screening, development, evaluation, and selection of the corrective measures alternative(s).

a. Identification of Preliminary Corrective Measures Alternative(s)

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Based on the results of the RFI and the CMS Plan objectives, the Permittee shall identify all possible alternatives for removal, containment, treatment and/or other remediation of the contamination.

b. Screening of Preliminary Corrective Measures Alternatives

The Permittee shall screen the identified preliminary corrective measures alternatives to eliminate those that may not prove feasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective action objective within a reasonable time period. This screening process focuses on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technological limitations.

Site, waste, and technological characteristics which are used to screen inapplicable technologies are described in more detail below:

1) Site Characteristics. Site data should be reviewed to identify conditions which may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration;

2) Waste Characteristics. Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by waste characteristics should be eliminated from consideration.

3) Technological Limitations. The level of technology development, performance record, and operation and maintenance problems shall be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process.

c. Development of Corrective Measures Alternatives

The Permittee shall develop corrective measures alternatives based on corrective measures objectives, and identification and screening of preliminary alternatives. The Permittee shall rely on engineering practice to determine which of

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the previously identified and screened technologies appear most suitable for the site. Technologies can be combined to form the overall corrective measures alternatives. The alternatives developed should represent a workable number of options that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Permittee shall document the reasons for excluding technologies.

When a new technology is proposed or similar waste streams have not routinely been treated or disposed of using the technology, the Permittee shall conduct laboratory and/or bench-scale studies to determine the applicability to facility conditions. The Permittee shall analyze the technologies, based on literature review, vendor contracts, and past experience to determine the testing requirements.

1) The Permittee shall develop a testing plan identifying the type(s) and goal(s) of the study(ies), the level of effort needed, and the procedures to be used for data management and interpretation.

2) Upon completion of testing, the Permittee shall evaluate the testing results to assess the technology or technologies with respect to the site-specific questions identified in the test plan.

3) The Permittee shall prepare a report summarizing the testing program and its results, both positive and negative.

d. Evaluation of Corrective Measures Alternative(s)

The Permittee shall evaluate each corrective measures alternative developed in Permit Condition VII.S.4.c. The evaluation shall be based on technical, environmental, human health and institutional concerns. The Permittee shall also develop cost estimates for each corrective measure.

1) Technical, Environmental, Human Health, and Institutional Concerns

The Permittee shall provide a description of each corrective measures alternative which includes but is not limited to the following: preliminary process

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flow sheets; preliminary sizing and type of construction for buildings and structures; and rough quantities of utilities required. The Permittee shall evaluate each alternative in the four following areas:

a) Technical

The Permittee shall evaluate each corrective measure alternative based on performance, reliability, implementability and safety.

(1) The Permittee shall evaluate performance based on the effectiveness and useful life of the corrective measure:

(a) Effectiveness shall be evaluated in terms of the ability to perform intended functions such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies.

(b) Useful life is defined as the length of time the level of effectiveness can be maintained. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.

(2) The Permittee shall provide information on the reliability of each corrective measure including operation and maintenance requirements and demonstrated reliability:

(a) Operation and maintenance requirements include the frequency and complexity of operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered.

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(b) Demonstrated and expected reliability is a way of measuring risk and effect of failure. The Permittee should evaluate whether technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.

(3) The Permittee shall describe the implementability of each corrective measure including relative ease of installation (constructibility) and total time required to achieve a given level of response:

(a) Constructibility is determined by conditions both internal and external to facility conditions and includes such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of facility (i.e., remote location vs. congested urban area). The Permittee shall evaluate what measures can be taken to facilitate construction under site specific conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities.

(b) Time has two components to be addressed: the time it takes to implement a corrective measure and the time it takes to see beneficial results. Beneficial results are defined as the reduction of contaminants to acceptable levels as established in the corrective measures objectives.

(4) The Permittee shall evaluate each corrective measures alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider include fire, explosion, and exposure to hazardous substances.

b) Environmental

The Permittee shall perform an Environmental Assessment for each alternative. The assessment shall focus on facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment for each alternative will include at a minimum, an evaluation of the short- and long-term beneficial and adverse effects of the response alternative,

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evaluation of any adverse effects on environmentally sensitive areas, and an analysis of measures to mitigate adverse impacts.

c) Human Health

The Permittee shall assess each alternative in terms of the extent to which it mitigates short- and long-term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizations of contaminants on-site, potential exposure routes, and potentially affected populations. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or regulations acceptable to the Administrative Authority.

d) Institutional

The Permittee shall assess relevant institutional needs for each alternative. Specifically, the effects of Federal, State, and Local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative shall be considered, as applicable.

2) Cost Estimate

The Permittee shall develop an estimate of the cost of each corrective measures alternative and for each phase or segment of the alternative. The cost estimate shall include capital, and operation and maintenance costs.

a) Capital costs consist of direct and indirect costs.

(1) Direct capital costs include:

(a) Construction costs: Cost of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measures alternative;

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(b) Equipment costs: Costs of treatment, containment, disposal and/or servicing of equipment used to implement the action;

(c) Land and site development costs: Expenses associated with purchase of land and development of existing property; and

(d) Building and services costs: Costs of process and non-process buildings, utility connections, purchased services, and disposal costs.

(2) Indirect capital costs include:

(a) Engineering expenses: Costs of administration, design, construction, supervision, drafting, and testing of corrective measures alternatives;

(b) Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permits for installation and operation;

(c) Start-up and shakedown costs: Costs incurred during corrective measure start-up; and

(d) Contingency allowances: Funds to cover costs resulting from unforeseen circumstances such as adverse weather conditions, strikes, and inadequate facility characterization.

b) Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. The Permittee shall consider the following operation and maintenance cost components:

(1) Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operation;

(2) Maintenance materials and labor costs: Costs for labor, parts, and other resources required for routine maintenance of facilities and equipment;

(3) Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;

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(4) Purchased services: Sampling costs, laboratory fees, and professional fees which can be predicted;

(5) Disposal and treatment: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues, generated during operation;

(6) Administrative costs: Costs associated with administration of corrective measures operation and maintenance not included under other categories;

(7) Insurance, taxes, and licensing costs: Costs of such items as liability and accident insurance; real estate taxes on purchased land or rights-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;

(8) Maintenance reserve and contingency funds: Annual payments into escrow funds to cover costs of anticipated replacement or rebuilding of equipment, and any large unanticipated operation and maintenance costs; and

(9) Other costs: Items that do not fit any of the above categories.

e. Selection of Corrective Measures Alternative(s)

The Permittee shall select a corrective measures alternative using technical, human health, and environmental criteria. At a minimum, the following criteria shall be used to select the final corrective measure or measures.

1) Technical

a) Performance. Corrective measure or measures which are most effective at performing their intended functions and maintaining performance over extended periods of time will be given preference;

b) Reliability. Corrective measure or measures which do not require frequent or complex operation and maintenance activities and have proven effective under conditions similar to those anticipated will be given preference;

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c) Implementability. Corrective measure or measures which can be constructed and operated to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and

d) Safety. Corrective measure or measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation will be preferred.

2) Human Health

The corrective measure or measures must comply with existing EPA criteria, standards, or regulations for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

3) Environmental

The corrective measure or measures imposing the least adverse impact or greatest improvement on the environment over the shortest period of time will be preferred.

5. Task VICMS Final Report and Summary

The Permittee shall prepare a CMS Final Report and Summary presenting the results of the CMS and recommending a corrective action program. The Report shall at a minimum include:

a. A summary of all the corrective measures alternatives originally identified, and the screening rationale employed. The results of development of each alternative shall be described, and the evaluation of those developed shall be presented in detail. The report will describe the rationale for selection of a corrective measures alternative, including performance expectations, preliminary design criteria and rationale, general operation and maintenance requirements, and long-term monitoring requirements. The report shall include summary tables which allow the alternative or alternatives to be easily understood. Trade-offs among health risks, environmental effects, and other pertinent factors shall be highlighted.

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- b. A proposed corrective action program that will attain compliance with concentration level objectives, control sources of releases, meet acceptable waste management requirements, and protect human health and the environment.
- c. Design and implementation precautions, including special technical problems, additional engineering data required, permits and regulatory requirements, access, easements, and right-of-way, health and safety requirements, and community relations activities.
- d. Cost estimates and schedules including capital cost estimate, operation and maintenance cost estimate, and project schedule (design, construction, operation).
- e. A schedule for corrective measure (remedy) implementation.

6. General CMS Reporting Requirements

- a. Two hard copies and one IBM compatible disk copy of all reports shall be submitted by the Permittee to the Administrative Authority as specified in Permit Condition VII.B.7.
- b. The CMS Plan shall be submitted by the Permittee to the Administrative Authority as described in Permit Condition VII.N.
- c. The CMS Final Report and Summary shall be submitted by the Permittee to the Administrative Authority as described in Permit Condition VII.P.
- d. Within 90 days of the date the Permittee is notified to begin a CMS, the Permittee shall provide the Administrative Authority with signed, quarterly progress reports as specified in Permit Condition VII.F.1.

Table 1: RFI/CMS SUBMISSION SUMMARY

Below is a summary of the planned reporting requirements pursuant to this Permit:

<u>Actions</u>	<u>Due Date</u>
Progress reports on all activities [Permit Condition VII.F.]	quarterly; no later than ninety (90) calendar days after effective date of Permit
RFI Workplan [Permit Condition VII.J.]	no later than 90 calendar days after the effective date of the Permit
Revised RFI Workplan [Permit Condition VII.J.2.]	as determined by the Administrative Authority
RFI Final Report and Summary [Permit Condition VII.L.1.]	to be proposed by Permittee in RFI Workplan
Revised RFI Report and Summary [Permit Condition VII.L.2.]	as determined by the Administrative Authority
Notification of newly-identified SWMUs [Permit Condition VII.G.]	no later than thirty (30) calendar days after discovery
Notification of newly-discovered releases [Permit Condition VII.H.]	no later than fifteen (15) calendar days after discovery
Interim Measures Plan [Permit Condition VII.I.]	as determined by Administrative Authority
Revised Interim Measure Plan [Permit Condition VII.I.]	as determined by Administrative Authority
CMS Plan [Permit Condition VII.N.2.]	forty five (45) calendar days after notification of requirement to perform CMS
Revised CMS Plan [Permit Condition VII.N.3.]	as determined by the Administrative Authority
CMS Final Report and Summary [Permit Condition VII.P.1.]	to be proposed by Permittee in CMS Plan
Revised CMS Final Report [Permit Condition VII.P.2.]	as determined by the Administrative Authority

Table 2: SWMUs AND AOCs REQUIRING AN RFI

Below is a list of the SWMUs and AOCs requiring an RFI.

- SWMU No. 7 - Chemical Agent Burial Site
- SWMU No. 8 - Former Burning Ground
- SWMU No. 17 - Mill Creek Landfill *
- SWMU No. 19 - Chaffee Road Landfarm (w/runoff pond) *
- SWMU No. 20 - Bayou Zourie Landfill
- SWMU No. 21 - Construction Debris Landfill *
- SWMU No. 23 - 2600 Block Vehicle Maintenance Units
- SWMU No. 24 - 2700 Block Vehicle Maintenance Units
- SWMU No. 25 - 2800 Block Vehicle Maintenance Units
- SWMU No. 26 - 2900 Block Vehicle Maintenance Units
- SWMU No. 27 - 3000 Block Vehicle Maintenance Units
- SWMU No. 28 - 3100 Block Vehicle Maintenance Units
- SWMU No. 29 - 3200 Block Vehicle Maintenance Units
- SWMU No. 32 - DEH Paint Booth and Paint Waste SAPs
- SWMU No. 33 - 3500 Block Vehicle Maintenance Units
- SWMU No. 34 - 3600 Block Vehicle Maintenance Units
- SWMU No. 35 - 3800 Block Vehicle Maintenance Units
- SWMU No. 37 - 4300 Block Vehicle Maintenance Units
- SWMU No. 38 - Former Firefighter Training Area
- SWMU No. 40 - Southeastern 4500 Block Directorate of
Logistics (DOL) Vehicle Maintenance Units *
- SWMU No. 41 - Northwestern 4500 Block Directorate of
Logistics Vehicle Maintenance Units
- SWMU No. 42 - Original Firefighter Training Area *
- SWMU No. 43 - DOL Waste Solvent Storage Area
- SWMU No. 44 - DOL Paint Booth and Paint SAP *
- SWMU No. 45 - DOL Battery Reclamation Unit
- SWMU No. 46 - 4600 Block Vehicle Maintenance Units
- SWMU No. 47 - 4700 Block Vehicle Maintenance Units *
- SWMU No. 48 - South Fort Polk Heavy Vehicle Pre-Wash Facility
Washrack and Lagoons
- SWMU No. 50 - South Fort Polk Wastewater Lagoon
- SWMU No. 53 - Aviation Maintenance Area Units
- SWMU No. 56 - North Fort Polk Heavy Vehicle Pre-Wash Facility

Washrack and Lagoons

Areas of Concern

AOC No. 2 - Avenue K Mogas AST *

AOC No. 3 - 4600 Block Fuel Pump Island

* Specific conditions for this SWMU/AOC are addressed in Permit VII.D. Based on the facility's response, the Administrative Authority may determine that an RFI need not be initiated. A determination that an RFI is not needed and that corrective action obligations are complete for this SWMU/AOC is not subject to the procedures of Permit Condition VII.M.